Change and Communication

Long-Term Norwegian PsychoMotor Physiotherapy Treatment for Patients with Chronic Muscle Pain

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Content

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Abstract

The aim of the present thesis is to enhance knowledge of processes of change and communication during long-term Norwegian PsychoMotor Physiotherapy (NPMP) treatments for patients with chronic muscle pain located to back and/or neck. In the following three separate studies, different types of change and communication are investigated on the basis of a longitudinal research design, including observations of treatment sessions, semi-structured interviews with patients and physiotherapists and personal notes written by patients.

- Self-narratives on the foundation of patients' bodily experiences of movement and breath prior to and through long-term NPMP treatment were investigated based on a multiple case study of two cases.
- Development and perception of change of movements and breath were explored during NPMP treatment based on a multiple case study of nine cases.
- Communication about change in demanding NPMP Physiotherapy treatment situations was explored in a multiple case study of eleven cases.

Study I highlights the concomitant development of self-narratives and bodily experiences on the basis of the dialogue between the patient and the physiotherapist. The main narratives at the start and at the end of the monitored period describe the patients' experiences from being divided in body and mind to experiencing the body as awakening. This change appears as a move towards a growing variety of self-narratives, and is related to an increasing awareness of limited bodily experiences of movements and breath. The slow shift of the narratives – from being detached from the body to being in touch with the body – captures these processes.

In study II, the exploration of the patients' bodily changes during NPMP treatment resulted in four patterns of change connected to movements, breath, reflections and transfer of experiences from the treatment context to contexts outside treatment. The fifth, to be detached from and to be in touch with the body, emerged interwoven in

each of the above mentioned patterns. Two patient groups, the *limited* and the *considerable change* group, were identified on the basis of the extent of change of the different patterns. Across the particular patterns and groups, the way patients perceived their bodies appeared as the core element for predicting change as well as change in the making.

In study III, the investigation of communication with regard to change in demanding treatment situations resulted in the identification of patterns of negotiation between the physiotherapist and the patient. The identified main pattern was: seeking common ground – a demanding negotiation process. This pattern was interrupted by short episodes of challenging obstructions to change; the pattern of ambivalence and uncertainty, and the pattern of impatience and disagreement. The physiotherapist's sensitivity of the situation and her/his capability of negotiation created possibilities for change. So did the physiotherapists' and the patients' capacity to bear and come trough demanding situations. The participants' negotiation of the physiotherapeutic tasks, the emotional aspects of the tasks, and the nature of the therapeutic relationship, seemed to emerge as processes of change. Change and communication appeared integrated.

The studies demonstrate that knowledge about change and communication in NPMP treatment of patients with chronic muscle pain of back and/or neck are built on detailed step-by-step processes of perceiving and creating meaning to an increasing variety of movement and breath. In the study, these processes were closely related to how the patient and the physiotherapist negotiated details by varying their ways of communication. Based on the knowledge-producing processes, the patients explored new ways of moving and understanding. Concomitantly, reflections on the application of new knowledge in different contexts outside treatment took place.

List of papers

The present thesis is based on the following original papers, which will be referred to by their Roman numerals:

I Øien, A.M., Iversen, S., & Stensland, P. (2007). Narratives of embodied experiences – Therapy processes in Norwegian psychomotor physiotherapy. *Advances in Physiotherapy, 9*(1), 31-9.

II Øien, A.M., Råheim, M., Iversen, S., & Steihaug, S. (2009). Self-perception as embodied knowledge – Changing processes for patients with chronic pain. *Advances in Physiotherapy, 11*(3), 121-129.

III Øien, A.M., Steihaug, S., Iversen, S., & Råheim, M. (2010). Communication as negotiation processes in long-term physiotherapy: A qualitative study. *Scandinavian Journal of Caring Sciences*. Accepted for publication.

Abbreviations

CBE	Comprehensive Body Examination
GPE	Global Physiotherapy Examination
GPM	Global Physiotherapeutic Muscle examination
IASP	International Association for the Study of Pain
ICD	International Classification of Disease
i.e.	id est (latin)
ICPC	International Classification of Primary Care
NPMP	Norwegian PsychoMotor Physiotherapy

1. Introduction

Since the end of the 1940s, the Norwegian PsychoMotor Physiotherapy (NPMP) approach has been applied to patients suffering from chronic muscle pain. In this thesis I want to explore knowledge about therapeutic change for patients with chronic muscle pain located to back and/or neck, on the basis of the therapeutic relationship. The thesis focuses on multiple long-term NPMP treatments which hold possibilities to explore change in its making and over time. The perspectives of patients and physiotherapists, as well as the therapeutic relationships, are addressed.

1.1 The author's professional story – positioning myself

The focus of the thesis is closely connected to my professional story. The connecting thread throughout this story is the aspiration to understand the patient's potential for, and processes of, change – an ever returning challenge.

In the end of the seventies I did my postgraduate education in Norwegian PsychoMotor Physiotherapy. Simultaneously, I attended courses in communication and family therapy based on systems theory perspectives. In the eighties I run my own clinical practice, which was partly organized within the municipal health system, and financed by the public health system and the patients. In the nineties I still had my own practice. Additionally, I held a job in a public psychiatric outpatient clinic, working in a professional team under the influence of a psychoanalytically trained psychiatrist. In both contexts, I utilized individual and group approaches influenced by the NPMP treatment concept, adapted to the needs of the specific patient. They suffered mainly from muscular pain with or without psychiatric diagnoses, such as anxiety, depression and eating disorder. I experienced how patients' attitudes and understanding of their symptoms varied and influenced the treatment. Some patients tried to understand and cope with the symptoms in the contexts of their lives, while others expected that the therapist removed the symptoms.

Over time, I experienced a growing dissatisfaction with doing instruction of movement as group training, without taking into consideration dynamic aspects of the group process. Hence, in the first part of the nineties, I attended education in group methods and group processes. In the end of the nineties, in order to improve the understanding of patients' experiences of their chronic muscle pain during NPMP treatment, I completed the master thesis: 'Å utvikle kunnskap om egen kropp. En kvalitativ studie av psykomotoriske behandlingsforløp.' (To develop knowledge about one's own body. A qualitative study of PsychoMotor Physiotherapy treatment) (Øien, 1999).

Based on my clinical and academic experiences, I felt a growing need for knowledge, not only about experiences of movement, but also about ways to communicate with the patient about experiences and stories related to movement in her/his life contexts. During the first years of the twenty first century, I therefore completed the family therapy education. My attention was directed towards questions concerning the complexity of patient's bodily lived experiences and narratives ahead of – and during – treatment, as well as the need for further clinical research within the NPMP field. Systematizing what kind of knowledge patients develop about themselves during long-term NPMP treatment became my objective. In addition to updated knowledge of research within this field, my professional narratives and experiences shaped the research questions and informed the analyses.

2. Aims of the Thesis

The purpose of the present thesis is to enhance knowledge of processes of change and communication during long-term Norwegian PsychoMotor Physiotherapy (NPMP) treatments for patients with chronic muscle pain located to back and/or neck.

The specific aims are:

- To explore the patients' self-narratives of health, illness and embodied experiences prior to and through the NPMP treatment courses (Paper I).
- To explore the patients' change and perception of change during the NPMP treatment courses (Paper II).
- To describe communicative patterns about change in demanding physiotherapy treatment situations (Paper III).

3. Previous Research and Theoretical Perspectives

In this section previous research in the field, as well as applied theoretical perspectives in the thesis, are addressed. First, I describe definitions of pain and studies of chronic muscle pain of back and neck. Second, I account for the applied theoretical perspectives of the studies. I thoroughly present the NPMP approach, the context and the main theoretical perspective of all the studies. The phenomenological perspective of Merleau-Ponty is mainly applied in study II. The narrative approach based on systems theory of communication applied in study I, and the systems theory of communication applied in study III, are described in the same section. The language used in the different sections varies, and is influenced by the language originating from the different traditions of knowledge.

3.1 Definitions of pain

Pain is defined as (Greek: poine, penalty) a sensation in which a person experiences discomfort, distress or suffering (Taber, 1969). The Taxonomy Committee of the International Association for the Study of Pain (IASP), (Lindblom et al., 1986, p. 217) defined pain as: 'An unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage'. They state that pain is always subjective, and that each individual learns the application of the word through experiences related to injury in early life. 'Pain is a sensation in a part or parts of the body, but it is also always unpleasant and therefore also an emotional experience'. Further they describe:

> Many people report pain in the absence of tissue damage or any likely pathophysiological cause; usually this happens for psychological reasons. There is usually no way to distinguish their experience from that due to tissue damage...

They conclude that if individuals regard their experience as pain, it should be accepted as pain. Braatøy (1947, p. 41) stated that the experience of muscle tiredness and muscle pain may be based on maintained muscle contraction in order to withdraw

from disturbing symptoms of anxiety. Vetlesen (2004) emphasises that physical pain – as being exposed to pain – is common to all mankind, but the moment we focus on how the pain, the chronic pain, influences one person, the individual aspect is included. The individual way to handle pain can separate the one person radically from the others. The experience of bodily pain, a first person experience, influences the person's being in the world. In line with this, Nortvedt and Grimen (2004) emphasise that the phenomenon of pain runs counter to the essence of medical science, i.e. to uncover phenomena that exist independently of our experiences, and to uncover risks of diseases. Pain is dependent on suffering persons, and is probably not a phenomenon to be explored and generalised in the third-person perspective (Nortvedt & Grimen, 2004). In medicine pain is classified as a symptom (ICPC-2, 2004).

3.2 Classification of pain

Defining selection criteria of patients in our studies, we drew on the classification system of pain developed within the field of medical science, despite the emphasis given to pain as first person experiences in the thesis as a whole. This choice was based on our intention to be in touch with research and scholars from medical traditions that emphasise quantifying pain. We included patients with chronic muscle pain localized to the back and/or the neck. Location-specific pain conditions are often viewed separately, but sometimes regional symptoms are grouped together, as back and neck pain (Natvig & Picavet, 2002a). Patients with low back pain may have associated chronic widespread pain (Natvig, Bruusgaard, & Eriksen, 2001; Natvig, Eriksen, & Bruusgaard, 2002b).

Based on convenience, the IASP defines the division between acute and chronic pain at three months (Lindblom et al., 1986). We included patients with pain of more than six months duration, knowing that patients with chronic pain attending NPMP usually

have suffered pain for years (L. Aabakken, B. Aabakken, Øfsti, Schröder, & Wilhelmsen, 1991; Breitve, Hynninen, & Kvåle, 2008).

3.3 Studies of patients with chronic low back and neck pain

In population surveys and primary health care in most Western countries, low back pain is the most common muscle-skeletal symptom leading to sick leave and work disability (Natvig et al., 2002a). Neck pain is the second most common (Ferrari & Russel, 2003).

3.3.1 Prevalence and gender

Prevalence of low back pain varies between 4% and 84% due to the use of the wide range of case definitions and registration periods. Lifetime prevalence varies between 58% and 84%, and point prevalence between 4% and 33%. Point prevalence for neck pain varies from 9.5 to 35 %, but most studies report a range between 10 to 15 % (Natvig et al., 2002a).

Based on the epidemiologic study on muscle-skeletal pain in Hordaland, Norway, 39 % men and 49% women reported experiences of pain and/or stiffness in three of the months of the last year (Sirnes, Sødal, Nurk, & Tell, 2003). In the Norwegian population study from 1994, at the one-week prevalence, middle-aged women reported low back pain more frequently than men (Natvig et al., 2001; Natvig et al., 2002a). Based on data from the Norwegian Health Survey, 1995, and the registers of the National Insurance Administration, 45% women and 38% men reported low-back pain within a 14 day period (Brage & Lærum, 1999). Neck pain is more common in women compared to men, and seems to be reported more frequently by the young and the middle-aged (Natvig et al., 2002a; Makela et al., 1991).

3.3.2 Risk factor or predictors

Identifying factors that are conducive to development and sustenance of chronic back and/or neck pain is important in order to guide targeted interventions, and to predict the outcome. It is generally accepted that pain has a multi-factorial background. However, the bio-psycho-social concept, introduced by Engel, is criticised as a language construction, and not based on a consistent theory (Kirkengen, 2002). Nevertheless, scholars claim that chronic muscular back pain is influenced by biological, psychological and social factors (Waddel, 1987; Waddel, 2004; Natvig et al., 2002a). Ferrari and Russel (2003) emphasised that the same factors influenced neck pain as other regional musculoskeletal pain disorders. Individual lifestyle factors, work related and non-work related physical and psychosocial factors can influence the development of low back pain (Natvig et al., 2002a) and neck pain (Natvig et al., 2002a; Ferrari & Russel, 2003). Dissatisfaction with work appears as a consistent predictor of poor outcomes of back pain (Linton, 2001). Psychological factors such as stress, distress, anxiety and depression, cognitive functioning and pain behaviour influence the onset of back and/or neck pain and the transition to chronic problems (Linton, 2001; Grotle, Brox, Veierød, & Vøllestad, 2005). Pincus, Burton, Vogel and Field (2002) pointed to the increased risk of the chronic development of low back pain connected to psychological distress, depressive mood, and somatization, but underscored that the importance attributed to coping strategies and fear avoidance need to be further clarified. The fear-avoidance model – the interpretation of pain as a sign of injury, followed by the development of pain related fear and avoidance of movement – appeared as less robust in describing the transition from acute to chronic pain in a study on longitudinal treatment courses (Sieben et al., 2005). Predictive factors for disability for women at five-year follow up after treatment, included duration of the current pain episode, repeated problems during the five years, exercise level before the current episode, pain frequency at base line, and disability after treatment (Enthoven, Skargren, Carstensen, & Oberg, 2006). The knowledge of long-term predictive factors has increased. However, the patients' own

understanding of their experiences of pain and the therapeutic relationship as predictive factors are given little attention.

3.3.3 Intervention and outcome

We utilised the terms chronic back pain, chronic neck pain, treatment, longitudinal studies and bio-psycho-social approach, and searched previous research, especially systematic reviews of interventions and outcomes, in Pub Med, Embase, Cochrane database, and PsycINFO.

Chronic back pain: In a systematic review, Van Tulder, Koes and Malmivaara (2006) found the interventions of back schools, progressive relaxation, exercises and intensive multidisciplinary treatment effective for chronic low back pain with regard to short-term pain relief and improvement of function. The interventions provided no long-term effects. In a meta-analysis, Hoffman, Papas, Chatkoff and Kerns (2007), on the basis of psychological interventions as behavioural, cognitive-behavioural, self-regulatory treatments or supportive counselling, noted positive effects on pain intensity, pain-related interference, health-related quality of life, and depression. A systematic review of the effect of individual patient education for low back pain showed that patients with chronic pain benefited less than patients with acute pain (Engers et al., 2008). Another systematic review showed that massage might be beneficial for patients with sub-acute and chronic low-back pain, especially in combination with exercises and education (Furlan, Imamura, Dryden, & Irvin, 2009). Still another systematic review, found that comprehensive work-oriented back pain management programs, that included a cognitive behavioural approach plus intensive physical training – supervised by a physiotherapist or a multidisciplinary team – seemed to reduce sick days for some workers with chronic back pain (Schonstein, Kenny, Keating, & Koes, 2003). Skouen and Kvåle (2006) found that patients suffering from chronic widespread pain and patients with low back pain needed different treatment programs. A higher percentage of return to work and considerable

cost effectiveness were demonstrated when the right treatment was given to the right patient.

Chronic neck pain: The Neck Pain task Force (Guzman et al., 2008) recommended the division of persons with neck pain, into four groups. Grade I and II include no signs of major pathology. Grade I consists of no or little interference with daily activities, while grade II does. Grade III and IV include patients with signs of nerve compressions and major pathology. The best evidence synthesis showed that exercises, mobilizations, manipulation, analgesics, acupuncture, and low-level laser provided some degree of short term relief for patients suffering from grade I and II. Viljanen et al. (2003) found that dynamic muscle training and relaxation training did not lead to better improvements compared with ordinary activity. In a systematic review, evaluation of treatments of manipulation and/or mobilisation plus exercise showed that multimodal care had short-term and long-term maintained benefits for patients with sub-acute and chronic neck pain with or without headache. The evidence did not favour any of the approaches (Gross et al., 2004). Carroll et al. (2008) found that the psychosocial factors as psychological health, coping patterns, and need to socialise, were the strongest prognostic factors of outcome, contrasted to general exercises.

Within the frame of chronic muscle pain, neck and back pain included, Steihaug and co-workers (Steihaug, Ahlsen, & Malterud, 2001; Steihaug, Ahlsen, & Malterud, 2002a; Steihaug & Malterud, 2002b) developed a group-based training program in accordance with the experience and the need of the participating women. The program comprised simple exercises with a focus on awareness, and relationship between muscle tension and breathing, as well as space for sharing experiences. Change was related to education, bodily experiences, acceptance and recognition.

3.3.4 Different patients with similar symptoms

In summary, multimodal treatment approaches seem to be more effective than single approaches. However, the effect over time seems unclear as well as the impact of the different aspects of the approaches. All the studies, with the exception of the studies of Steihaug and co-authors are based on the same methodological frame, i.e. investigating outcome of treatments without taking into consideration that participants experience themselves and the world differently. Building knowledge about change at a micro-level based on individual long-term treatments may add to our understanding. In line with this, Turk (2005) suggested that the lack of satisfactory treatment outcomes for patients with chronic pain syndromes may be accounted for by the patient homogeneity myth – the assumption that all patients with the same medical diagnosis are similar on all important variables. He discussed the importance of considering patient heterogeneity for those who may be diagnosed with the same medical syndrome.

3.4 Norwegian PsychoMotor Physiotherapy

Norwegian PsychoMotor physiotherapy was developed by the physiotherapist Aadel Bülow-Hansen (1906–2001) and the neurologist and psychiatrist Trygve Braatøy (1904–1953), based on their clinical experiences of how human beings act as bodies in their social and physical surroundings (Bunkan & Thaulow, 1971; Thomstad, 1986; Øvreberg & Andersen, 1986; Thornquist & Bunkan 1986; Thornquist & Bunkan, 1991; Husom, 1991).

3.4.1 Presentation of Aadel Bülow-Hansen

Aadel Bülow-Hansen completed her physiotherapy studies at Oslo Orthopaedic and Medico-Mechanical Institute in 1923. From 1927–1945 she worked at Sophies Minde orthopaedic hospital, Oslo. Patients suffering from poliomyelitis contributed to her perspective of the body as a functional unity. Concurrently, she ran her own

outpatient clinic, and developed a growing interest for patients suffering from muscle pain in shoulder, neck and arm, diagnosed at that time as occupational myalgia. She had the opinion that strain and working positions influenced muscle tension and pain, and gradually experienced that the patient's constitution and way of coming to grips with life were important. Over time, the patient's way of breathing became the centre of her attention. However, she struggled to understand why some patients did not improve, but rather got worse during the relaxation of, for example, the shoulder muscles. In 1947, her career took a new direction. In the medical society of neurology, she presented a patient with 'occupational myalgia', and demonstrated her approach of massage and movements in interplay with the patient's rhythm of breathing. Braatøy was present, and she gained his interest. They started their collaboration at the psychiatric ward, Ullevaal hospital, Oslo, which continued until Braatøy's death (Bunkan & Thaulow, 1971; Bülow-Hansen, 1982; Bunkan, 1982; Thomstad, 1986; Bülow-Hansen & Hauge, 1990; Husom, 1991).

3.4.2 Presentation of Trygve Braatøy

Trygve Braatøy completed his medical studies at the University of Oslo in 1929. He did his psychiatric training at Dikemark hospital, and at Vindern Psychiatric Clinic, and his psychoanalytic training in Berlin. In 1946 he became the head of the psychiatric ward at Ullevaal Hospital, Oslo (Koch, 1990). During the years of collaboration with Bülow-Hansen, Braatøy published two papers concerning psychology and anatomy in the physiotherapy treatment of arm neuroses (Braatøy, 1948a; Braatøy, 1948b; Braatøy, 1952). Bülow-Hansen's influence on this work was decisive (Thomstad, 1986).

Braatøy (1954) was influenced by Freud's revolutionary step from explaining symptoms on the basis of structural changes to understand them as functions of earlier experiences (p. 58), and by Reich's early work (p. 101). Reich pointed to the importance of movements, as well as the impossibility of expressing oneself emotionally without a bodily reaction. In line with Reich, Braatøy connected the

classical psychoanalytical tradition – mostly verbal – to clinical observation and neurological-physiological insight. He understood bodily reactions as acts, and saw these as important as the patient's words and manners of speaking. Bodily reactions were intimately interwoven in the attitude to the world. Affects were assessed as biological and sociological phenomena, he claimed. The habitual posture might demonstrate that the bodily tension acts as a suppressing force. By observing the patient's face, respiration and movement, the therapist was informed about the patient's emotional tension, his affect or blocking of affect (Braatøy, 1954). Colleagues criticised his orientation in the direction of somatic medicine (Thomstad, 1986). However, Braatøy saw no contrast between psyche and soma, but understood the mind as a function of the body. He emphasised knowledge developed on the basis of the patient's treatment experiences (Braatøy, 1947; Braatøy, 1952; Braatøy, 1954).

3.4.3 NPMP development – from exploration of clinical experiences to growing systematization

The first development of NPMP was based on Bülow-Hansen's and Braatøy's experiences from their different clinical fields. Braatøy's theoretical perspective influenced by psychoanalysis and somatic medical knowledge was essential, as well as experiences and ideas developed through the collaboration of treatment of mutual patients and Bülow-Hansen's treatment of Braatøy himself. Examining and treating patients suffering from muscle pain, they explored curiously the significance of respiration in relationship to movement, posture and emotions. By combining reassuring dialogues and muscular manipulations, they evoked unrest and emotional expressions as anxiety, laughter, sadness, and anger. When patients' progress came to a halt, further development was made possible by shifting between bodily and verbal approaches (Bülow-Hansen, 1967).

Based on unsuccessful patient experiences, they explored differences between patients suffering from pain connected to occupational strain versus emotional strain. The symptoms appeared as almost identical, but the genesis of the symptoms was

different. Braatøy (1952) emphasised that postural muscles fulfil local movement tasks, and also mobilize to meet the demands imposed by the situation. Hence, the patient's attitude to tasks at work and mode of existence comes into play. The posture of the overburdened worker was understood through the study of the anatomy, the situation at the working place, and/or in the light of his/her imprisoned emotions. They searched to understand why patients found it difficult to relax the muscle latissimus dorsi, and found in Schreiner's medical textbook from 1919, that this muscle counteracted the complex movements of the startle pattern or flexion pattern, i.e. increased tension of flexion, adduction and inward rotation muscles, and breathing muscles. They concluded that the muscle was overstrained in patients with arm-neurosis and anxiety neurosis because the muscle restrained the startle pattern. Emotions might become fixed by clenching the fists, gritting the teeth, holding the breath or stiffening the back. Moreover, this local reaction might come to a deadlock, be automatic and unconscious. The words, the socialized symbols, were assessed to be deeply rooted in biological conditions. Reciprocal interdependency between relaxation of muscle tension, breathing, emotional expressions, vocalization, words and verbal information were emphasised (Braatøy, 1952). Braatøy (1947) provided a 'bio-logical' perspective on how the release of muscular tension of mimic muscles might facilitate verbal expression, and how the increase of tension might slow down verbal expression.

In order to plan and evaluate the treatment, they recommended a precise definition of these phenomena in each individual case, based on the case history and the physical examinations. Differences between the groups with either occupational or emotional strain were most easily revealed by examining the individual's ability to yield passively to the force of gravity (Braatøy, 1952). In the patient group suffering from emotional strain, increased tension of flexor muscles and restricted breathing, were understood as a pattern of protection. Relaxing this pattern might facilitate emergence of emotions, uneasiness, anxiety or depression. In order to reduce and handle this emotional imbalance, they developed an approach that included two concomitant

aspects, i.e., relaxing the movement pattern of flexion and facilitating the movement pattern of stretching. Emphasis was given to the interdependency between the lower and upper part of the body (Bunkan & Thaulow, 1971; Bülow-Hansen & Hauge, 1990). Bülow-Hansen wrote: 'I learned to observe the patient as a whole, from feet to head, always starting with the basis, and release the respiration through readjustment of the posture, not by active exercises' (1982, p. 16) (translated from Norwegian by the author). Moreover, Bülow-Hansen (1967) learned to differentiate between patients suffering from muscle tension and pain connected to somatic disorders, severe psychological disorders, and every day strain.

Bülow-Hansen shared her experiences with physiotherapists and physicians through clinical presentations of patients, supervision and treatment of colleagues (Bunkan, 1982). In order to preserve and to better understand her approach in details, colleagues filmed her presentations (Bunkan, 1982). She described the approach in interviews (Bunkan & Thaulow, 1971; Husom, 1991) and in papers (Bülow-Hansen, 1967; Bülow-Hansen, 1990). In 1982, The Festschrift PsychoMotor treatment was edited, a collection of earlier and new clinical stories, experiences and theoretical perspectives of Bülow-Hansen, colleagues, collaborators and patients (Bunkan, Radøy, & Thornquist, 1982). Creating a basis for the education of NPMP specialists, NPMP specialist Gudrun Øvreberg and the psychiatrist Tom Andersen filmed and described in detail how Bülow-Hansen treated the individual patients (Øvreberg & Andersen, 1986). Thornquist and Bunkan (1986; 1991) presented the approach, and emphasised that the NPMP perspectives of the body and the diseases of muscle-skeletal pain were at stake with the reductionist perspective of mainstream medicine and physiotherapy. The NPMP perspective highlighted that human beings are their bodies, and that the body as a whole, local symptoms and local movements influence each other reciprocally. Later, other physiotherapists described their clinical experiences (Ekerholt, 1995; Ianssen, 1997). On the basis of experiences from individual treatments, NPMP principles were adapted and applied in groups (Øvreberg, 1983; Ianssen, 1989). Braatøy's perspective on mind and body as the

basis for NPMP was analysed in the light of Lögstrup's philosophy (Sviland, Martinsen, & Råheim, 2007; Sviland, Råheim, & Martinsen, 2009). Steinsvik (2008) investigated the epistemological framework of NPMP on the basis of her own practice. The second festschrift included articles from clinical practise, as well as theoretical and empirical research studies (Ekerholt, 2009). The last decades' development points to a new direction with an emphasis on empirical studies of the NPMP examination, the process and the outcome of treatments. These studies are presented in the paragraphs of examination and treatment, respectively.

3.4.4 Who recruits to NPMP today?

L. Aabakken and co-workers (L. Aabakken, B. Aabakken, Øfsti, Schröder, & Wilhelmsen, 1991; L. Aabakken, B. Aabakken, Øfsti, Schröder, & Wilhelmsen, 1992a) investigated NPMF recruitment and found that 80 % of 152 patients were women. The majority presented their main symptoms as long-term local or general pain and tension. Two thirds presented a variety of symptoms, mainly anxiety and depression. Breitve, Hynninen and Kvåle (2008) compared 60 patients seeking NPMP treatment with 66 non-help-seeking persons in terms of subjective health complaints and emotional symptoms. They found that 82 % of the patients were women with long-term primarily muscle-skeletal complaints. Compared to non-help-seeking persons, they reported four times more depressive symptoms and subjective health complaints. The most clinical significant problems were sleep disturbances (85%), anxiety (69%), low quality of life (63%), depressive symptoms (59%), and fatigue (57 %).

3.4.5 NPMP examination

The NPMP examination is based on the NPMP perspective. The examination includes a process aspect, a preliminary treatment, aiming to evaluate the patient's potential for change. The examination consists of an introductive dialogue about the patient's illness story, and assessment of the bodily functions of respiration, posture,

movements, autonomous reactions as well as muscle quality. The introductive dialogue encompasses the patient's descriptions of experienced symptoms related to strain in daily life and working contexts. The body examination comprises information from the whole body based on the degree and extension of the restrictions appearing in movements and breath, as well as the patient's experience of and reactions to the examination. Respiration is considered as the superior function. The physiotherapist gives attention to whether and how the patient spontaneously adapts her/his way of breathing to shifts of positions, movements and touch of painful muscles. The rhythm of breath indicates whether the strain is mainly emotionally and/or bio mechanically based. Some physiotherapists emphasise information about the patient's perception or idea of their body (Thornquist & Bunkan, 1986; Thornquist & Bunkan, 1991). Each finding is assessed and compared to all the findings of the body as a whole (Thornquist, 1988). The patient's readjustment ability, not the diagnosis, indicates precaution and progress in the treatment (Thornquist, 1998). As treatment is the focus of this study, I decided to not describe the body examination in more detail. For the same reason, the following studies of body examination will only briefly be mentioned.

3.4.6 NPMP examination – studies

Built on the NPMP examination developed by Aadel Bülow-Hansen (Bunkan, Bülow-Hansen, Houge, Hødal, & Hansson, 1978; Thornquist & Bunkan, 1986; Øvreberg & Andersen, 1986), Sundsvold and Bunkan constructed subscales within the domains of posture, respiration, movement and muscular/skin consistency, in order to investigate their psychometric properties. Sundsvold developed the Global Physiotherapeutic Muscle examination (GPM-78) for use in clinic and research. Systematic connections between the frequency of deviant muscle conditions and psychopathology were found (Sundsvold & Vaglum, 1985). Bunkan developed the Comprehensive Body examination (CBE) and conducted reliability and validity studies. Global and domain scores discriminated between patient groups suffering from pain syndromes, different psychiatric disorders and non patients (Friis, Bunkan,

Ljunggren, Moen, & Opjordsmoen, 1998; Bunkan, Opjordsmoen, Moen, Ljunggren, & Friis, 1999; Bunkan, Ljunggren, Opjordsmoen, & Moen, 2001; Bunkan, Moen, Opjordsmoen, & Ljunggren, 2002; Bunkan, 2003). A slightly scaled NPMP examination was developed and applied in combination with psychological tests as assessment tools of patients participating in the Bergen project on Brief Dynamic Psychotherapy (Mølstad et al., 1989; Havik et al., 1991; Mølstad et al., 1995). A convergent pattern between the muscular and respiratory variables and psychological ones was indicated. Based on Sundsvold's GPM-78, Kvåle and co-workers investigated the measurement properties of the examination in patients with long-lasting muscle-skeletal symptoms of pain. A shorter version, GPE-52, was developed (Kvåle, Ellertsen, & Skouen, 2001; Kvåle, Johnsen, & Ljunggren, 2002; Kvåle, Ljunggren, & Johnsen, 2003a; Kvåle, Ljunggren, & Backer, 2003b; Kvåle, Skouen, & Ljunggren, 2003c). The GPE-52 discriminated significantly between patients with general and local muscle-skeletal symptoms of pain, and healthy subjects (Kvåle, Skouen, & Ljunggren, 2005). Thornquist (1994) on the basis of first encounters between physiotherapists and patients suffering from muscle-skeletal disorders, in manual therapy, NPMP and district physiotherapy found that the different groups of physiotherapists approached the examination differently, and applied different frames of references.

Based on interviews with patients, Ekerholt and Bergland (2004) found that examination required mutual interpretation and that the patient's own knowledge represented a potential for understanding the findings as well as their situation.

3.4.7 NPMP treatment

Treatment is based on the NPMP theoretical perspective, illness story and body examination. The aim is to readjust the posture and/or the muscular functional imbalance through breath releasing massage, touch, and movements adapted closely to each patient's reactions (Øvreberg & Andersen, 1986; Thornquist & Bunkan, 1986; Bülow-Hansen & Houge, 1990; Thornquist & Bunkan, 1991).

The balance and the function of the body are based on the interaction and integration of different parts and functions. Standing in balance presupposes continuous use of postural muscles. The balance/imbalance of the legs influences and is influenced by the balance/imbalance of the body as a whole. Hence, obtaining balance in standing position is a continuous task. This physical function is assessed in close connection to the psychological meaning of being in touch with the reality (Braatøy, 1947; Bülow-Hansen, 1967; Mølstad et al., 1989). Causes of imbalance are to be found in increased muscular tension in any part of the body as well as increased tension of the respiration muscles. Breathing restrictions, moving restrictions or muscle tension, and emotional disturbances are seen as interdependent elements. The intention of readjusting the breath through relaxation and stretching movements is to facilitate the spontaneity of the breath, as well as to decrease muscle tension. The rhythm of breath is an indicator of improvement. Hence, the physiotherapist centres her attention and adapts her approach in accordance with the patient's way of breathing. Clenching the teeth increases the tension of the jaw, the throat and the mimic muscles and constrains the abdominal breathing, while yawning and sighing facilitate the relaxation of the diaphragm. Tension of throat and mimic muscles may influence the balance and the position of the head. Then, imbalance of the head may increase the tension of the neck and the shoulder muscles, as well as the tension of the diaphragm and consequently, the balance and tension of the back. Tension of jaw, throat and mimic muscles are, more than other muscles, suggested to be connected to our emotions. The physiotherapist emphasises to increase the patient's sensation of muscles' state of tension (Bülow-Hansen, 1967; Bülow-Hansen, 1982; Øvreberg & Andersen, 1986; Thornquist & Bunkan, 1986; Thornquist & Bunkan, 1991). Traditionally, NPMP was practised with verbal exchange, but verbal reflection to gain insight beyond the actual situation was not recommended (Braatøy, 1952). Recently, a shift in the view on verbal reflection based on bodily experiences is taking place (Ekerholt & Bergland, 2004).

3.4.8 NPMP treatment – studies

There are few studies investigating the process and outcome of NPMP treatment. L. Aabakken and co-workers (L. Aabakken et al., 1991; L. Aabakken, B. Aabakken, Øfsti, Schröder, & Wilhelmsen, 1992b) assessed the effects of treatment of 126 patients, mainly suffering from chronic pain. After a half to one year, 75% of the patients claimed reduction of symptoms. At a median treatment length of 13 months and two monthly treatments, symptoms and general function improved.

K. Monsen and J. Monsen (2000) investigated pain reduction in a controlled study of 40 patients with pain symptoms, mainly located to head, neck, shoulder and lower back. The intervention group, 20 patients, received 33 treatment sessions of Psychodynamic body therapy, i.e. NPMP and affect-consciousness approach. The control group, 20 patients, received treatment as usual or no treatment. Evaluations before treatment, at the end of treatment and one year later, were based on visual analogue pain scale (VAS), symptom checklist (SCL-90-R), inventory of interpersonal symptoms (IIIP-C), Minnesota Multiphasic Personality Inventory (MPPI), and affect-consciousness interview (ACI). In the intervention group, at the end of the treatment and one year later, findings included significant reduction of pain, change of level of somatization, depression, anxiety, denial, assertiveness, social withdrawal and increased affect consciousness compared to the control group.

Ekerholt and Bergland (2006), based on interviews three months after completed NPMP treatment, explored experiences of massage of ten patients with psychosomatic or musculoskeletal disorders. The identified categories, the ambiguity of pleasure and provocation, the ambiguity of losing and gaining control, and intra- and interpersonal dialogues, indicated that massage promoted relaxation and appeared as entrance to own perception and reflection. Ekerholt and Bergland (2008) explored experiences of breathing of the patients above. Three categories were identified, i.e. ‘breathing: an incomprehensive and disparate phenomenon’, ‘breathing: access to meaning and understanding’, ‘breathing: enhancing feelings of mastery’, and

indicated that the experience of breathing enabled the patients to understand internal and external influences of their well-being.

Dragesund and Råheim (2008), on the basis of four focus group interviews, explored the experience of body awareness for 13 patients with chronic muscle pain. Two groups consisted of patients on waiting list for NPMP and two of patients receiving NPMP. They identified three themes, i.e. awareness of, associations about, and feeling for one's own body. The participants receiving NPMP, with one exception, described the experience of new body awareness as essential for coping with pain.

Anderson, Strand and Råheim (2007) investigated the long-lasting effect of symptom reduction and return to work for patients with chronic widespread pain, based on a follow-up study of NPMP group training, after completion of a multimodal cognitive behaviour programme. In a randomized controlled trial, 52 patients were enrolled. The intervention group attended NPMP group training 18 times during 1.5 years. The control group received treatment as usual. All patients were tested within two weeks after the multimodal treatment, after 12 and 18 months with the following outcome measures: work status, Global Physiotherapeutic Examination (GPE-52), pain levels, and quality of life. All patients who participated in the multimodal program improved. For patients in the follow-up NPMP group training, the study indicated additional reduction of symptoms and a higher rate of return to work, but not a significant difference between the groups.

There are a few long-term NPMP detailed studies of one to two cases, with a focus on changing processes for patients with chronic pain. Stokkenes (1997) and Øien (1999) both studied two treatment courses that consisted of one physiotherapist and two patients in the physiotherapist's outpatient clinic. Gunnari (1994) studied one of her own patients, and Steinsvik (2003; 2008) two of her own patients.

3.5 Why this study?

Studies of multiple treatment courses consisting of different physiotherapists and patients are needed in order to increase our knowledge of change over time. By addressing change at a micro-level for patients with chronic muscle pain located to back and/or neck, based on individual tailored long-term NPMP treatment in a multiple case research design, the thesis may add to our understanding of treatment as well as outcomes over time. Previous research of patients with chronic muscle pain has given little attention to patients' own understanding of their experiences of pain and the influence of therapeutic relationships as predictive factors for outcomes. In our study the patients' perspectives and the therapists' perspectives are explored in detail, as well as the influence of the therapeutic relationship. In order to deepen the understanding of bodily based changes for patients with chronic muscle pain, and the influence of communication between patients and therapists in NPMP, theoretical perspectives considered relevant were included.

3.6 Merleau-Ponty – the phenomenology of the body

The philosophical perspective of the French philosopher Maurice Merleau-Ponty (1908–1961) was found to capture the ambiguous NPMP perspective of the body, i.e. the unity of biological and social aspects. Moreover, this philosophical perspective adds to the understanding of bodily change as highlighted in the present thesis. In 1945 he edited his main work, Phénomènologie de la Perception, and in 1962, the first English edition, Phenomenology of Perception, was published. The edition, published in 2002 and reprinted in 2004, is referred to in this chapter. The core of his philosophy is the primacy of the body as key to the understanding of the human being in the world.

3.6.1 The body as basis of available and possible acts of movements and expressions

The philosophy of phenomenology is the study of essences, i.e. the essence of perception and the essence of consciousness. The essence of perception is defined as our access to knowledge about the world. In other words, the world is what we perceive and live through. Perception is based on the relation between the background and the figure. 'Perception is the background from which all acts stand out, and is presupposed by them.' (Merleau-Ponty, 2004, p. xi). For example, I understand the act of walking as the figure that is related to the path in the hillside, the background. According to Merleau-Ponty, acts can serve as backgrounds for the development of new and varied acts. Following the example above, the act of walking can open for varied ways of walking. Merleau-Ponty brought essences back into existence, by understanding the man and the world from the 'facticity'. 'It is a fact that I believe myself to be first of all surrounded by my body, involved in the world, situated here and now' (Merleau-Ponty, 2004, p. vii). The world is what we live through and perceive based on the synthesis of our senses. The world is directly experienced and constituted by the incarnated or the embodied subject. The perspective of the first person is emphasised.

> I am the absolute source, my existence does not stem from my antecedents, from my physical and social environment; instead it moves out towards them and sustains them, for I alone bring into being for myself …the tradition which I elect to carry on.. (Merleau-Ponty, 2004, p. ix).

The subject's experiences of phenomena in the world – including her/his own lived body, things and other persons – encompass the prescience life of consciousness, which is the basis for science, the second order experience. Hence, the body is the subject's point of view upon the world, and the body is an object of the world. The living body is a unity of functions, i.e. the senses, the cognition, the movements, the emotions and the expressions of speech. Based on these functions, the body can be used in different ways. By acting in the world we have a great variety of possibilities

open. ‘The use a man is to take of his body is transcendent in relation to that body as a mere biological entity’ (Merleau-Ponty, 2004, p. 220).

Incarnated subjects are acting subjects in the world of space and time. Merleau-Ponty (2004, p. 87) stated: ‘I cannot understand the functions of the living body except by enacting it myself, and except in so far as I am a body which rises towards the world.’ Thus, the subject and the world are inseparable. The body inhabits and belongs to a world of space and time, in contrast to have ideas about space and time. ‘I belong to them, my body combines with them and includes them’ (Merleau-Ponty, 2004, p. 62). With regard to space, the patients in study II found it more challenging to relax in standing positions than in sitting positions. Regarding time, one patient gradually experienced decreased tension and pain of the back muscles, not by speeding up, but by trying to walk more slowly. This experience evolved over time and may point to Merleau-Ponty’s statement that the synthesis of space and time includes indeterminate horizons, which demand that tasks have to be performed in new ways. The embodied subject perceives the space as a field of possible actions, and the body is a system of present positions as well as ‘an open system of an infinite number of equivalent positions directed to other ends’ (Merleau-Ponty, 2004, p.163). When walking on uneven paths, for example, the subject is normally competent to continually readjust the balance. Merleau-Ponty pointed to the movement and the background as a unique totality, and that perception and movement vary as a whole.

Moreover, movement is an original access to the world, i.e. basic intentionality. On the basis of intentionality, i.e. the general power of putting oneself into a situation, experiences are made possible. The intentionality – or the intentional arc – are concepts of origin and creates the unity of the world and of our life. Intentionality is connected to the unity of the body, i.e. movement, emotions, cognition, expressions, and points to the subject’s possibility of creating action, as a power of ‘I can’, in contrast to ‘I think’. Illness influences the intentionality negatively. When the patient, in the example above, tries to walk differently on her way to work, the intentionality or the power of ‘I can’ emerges.

Merleau-Ponty stated that the world is a world as meaning. He linked meaning to the body: 'My body is that meaningful core which behaves like a general function' (Merleau-Ponty, 2004, p.170). The embodied subject, by moving and expressing her/himself in the world, has the basic power of giving a meaning. The power to give meaning to something is also a matter of 'I can'. The meaning-giving act is connected to consciousness, and includes the notion that there is something to be conscious of, as for instance another human being, a thing, an emotion, a movement. But, the essence of consciousness consists in rediscovering the actual presence to oneself. Thus, the subject's self-knowledge is based on the involvement in the world of space and time. Merleau-Pony (2004, p. xii) said that 'man is in the world, and only in the world does he know himself'. However, the unity of the human being and the world is lived, before we reach knowledge about it, which is based on specific acts of identification, i.e. distinguishing one phenomenon from another. The embodied subject is involved in processes of experience that includes making an object or a phenomenon into an object or a phenomenon. In the example from study II, the patient gradually experienced a local muscle tension based on the background of more relaxed movements. The perception of our own body as well as external phenomena is described as a non-positing consciousness, i.e. a consciousness in possession of not fully determinate objects with unclear meanings. In study II, the patients, who experienced general but unclear perception of tension of the whole body, illustrate this point. In accordance with Merleau-Ponty, consciousness comes into existence when the subject creates limits to the objects or the phenomena, on the basis of acts of attention. Attention is 'the active constitution of a new object which makes explicit and articulate what was until then presented as no more than an indeterminate horizon' (Merleau-Ponty, 2004, p. 35). Related to the patients in study II, attention facilitates the act of self-knowledge by creating a perceptual field, i.e. exploring movements of the back. The attentive exploration is related to previous acts.

> The tacit thesis of perception is that at every instant, experience can be co-ordinated with that of the previous instant and that of the following, and my

> perspective with that of other consciousnesses …. that what is now indeterminate for me could become determinate for a more complete knowledge (Merleau-Ponty, 2004, p. 62).

The aforementioned patient in the study illustrates this point, when she gradually perceived the muscle tension localised to the back region in contrast to the body as a whole. Being present in the situation emerged as important in the knowledge-creating processes. Merleau-Ponty (2004, p.111) stated: 'To be a consciousness or an experience is to hold inner communication with the world, the body and other people, to be with them instead of being beside them'.

3.6.2 Habits as knowledge based on movements and expression

Etymologically the word having is related to the word habit. The body is our general medium for having a world, and includes actions at different levels, such as satisfying biological needs and expressing ourselves emotionally through movements and words. As described above, the body acts like a meaningful general function. Habit is knowledge based on this general function and effort. Merleau-Ponty (2004, p. 175) stated that: 'Habit in general enables us to understand the general synthesis of one's own body'. The various parts of the body as well as the visual, tactile and motor aspects of the body are intertwined. In study II, the patient used to walk and work in a rapid manner, contracting muscles from head to legs. Knowledge about the world, and of oneself inhabiting the world, is based on the lived body and emerges as equivocal, consisting of the layer of the habit-body and the body at this moment. The layer of habit-body encompasses incorporated knowledge in some general aspects in contrast to the instantaneous and spontaneous experience. Merleau-Ponty (2004, p. 161) stated: 'At every moment, previous attitudes and movements provide an ever ready standard of measurement'. In the present, we grasp and interpret experiences of past time and past space based on what we now understand. 'History is neither a perpetual novelty, nor a perpetual repetition, but the unique movement which create stable forms and breaks them up again' (Merleau-Ponty, 2004, p. 101). The acquisition of a habit is the motor grasping of a motor significance. Thus, to my

understanding, change of movements may influence the habits of the body as well as the creation of new meanings. With regard to the example, to learn to walk more relaxed is to acquire a certain style of moving that includes a new use of one's body and an extended meaning. Merleau-Ponty argued that ambiguity is the essence of human existence and everything we live or think has several meanings. Habit expresses our power of extending our being or existence in the world. Habit is the fundamental power of the body to renew acts at all levels. The acquisition of a habit encompasses a rearrangement and renewal of the corporeal schema. A movement is learned, when the body has incorporated it. Habit is cultivated when it has absorbed a new meaning. In the example, when the patient made an effort to walk less tensely, by walking slower, she exerted herself in order to renew her acts. Concomitantly, she ascribed new meaning to her tension, as something she influenced.

Merleau-Ponty (2004, p. 211) described how the organist in the first place learned to play the specific organ, and how he later adapted his habit to different organs, implicitly rearranging his corporeal scheme. The way the organist plays – either enthusiastically or distractedly being caught up in the situation – points to the body as a natural power of expression.

Through expressive movements and speech, we understand other people as well as perceive things. In the same way as the incarnated subject inhabits space and time, the subject inhabits the linguistic world. Merleau-Ponty (2004, p. 203) wrote that the word 'inhabits things and is the vehicle of meanings', and that the person possesses different ways of using words. Besides bearing a conceptual meaning, the word has an existential meaning with a reference to an emotional content, i.e. affective value or attitude called a 'gestural' sense. Phenomena, as for instance one's own and other's reactions and health problems appear indeterminate as long as they are not given names. By naming objects or phenomena, the subject facilitates their transformation from indeterminate to more determinate states. In this process speech and thought are interlinked. The subject is therefore in a kind of ignorance of his/her thought and reactions more generally, as long as they are not presented through internal or

external speech. Subjects explore possible new meanings based on already available meanings, former acts of expression. Available meanings encompass the common cultural store. The speaking subject can awaken previous – though forgotten meanings – and thus, he/she constitutes them as a basis for active use. Meanings can combine and create new thoughts by opening a new dimension to our experience. Merleau-Ponty (2004, p. 212) stated:

> We must therefore recognise as an ultimate fact that this open and indefinite power of giving significance – that is both of apprehending and conveying a meaning – by which man transcends himself towards a new form of behaviour, or towards other people, or towards his own thought, through his body and his speech.

Loss of speech, for instance, can emerge as an emotional expression, interpreted as a refusal of co-existence. Loss of memory and speech are seen as acts that can belong to rejected areas of life, kept at a distance and wrapped in generality. Hence, they are not present as determinate acts. Rejections restrict available fields of experiences. A whole field of possibilities may collapse if the power of, for instance, speech is lost. In the example from study II, the power of speech connected to emotional expressions of daily strain appeared as partly lost.

The subject's internal power influences how the subject makes use of his/her body. Merlau-Ponty (2004, p. 190) emphasised that 'our freedom rests on our being in a situation, and is itself a situation'. Developing possible new habits thus depends on using the general power of putting oneself into a situation. New habit transforms from an indeterminate and meaningless state to a more determinate and meaningful one. 'Existence is indeterminate in itself' (Merleau-Ponty, 2004, p. 196). Hence, in NPMP treatment, the basis and the possibilities of change points to the participants' ability to deal with repeated episodes of indeterminacy, directed at grasping a more determinate state.

3.7 Communication and narratives

Systems theory adds knowledge to the investigation of communication between the participants of the therapeutic relationship, but also gives a framework for the development of narratives during treatment, the aims of the thesis. In physiotherapy, the application of this perspective seems useful as it embraces and describes in detail the communication of non-verbal and verbal messages. The NPMP perspective and the perspective of phenomenology attribute meaning to bodily expressions as acts of movements and speech. In the NPMP literature descriptions of how participants share and socially co-construct meanings and narratives are rare. Implicitly, Merleau-Ponty seemed to capture this communicative ambiguity embedded in the different uses of the body, in the tension between what is available and what is possible. In study I, I applied a narrative approach, developed on the basis of systems theory and inspired by social constructivism. In study II, communication appeared implicitly intertwined in the bodily changing process. In study III, the communicative perspective influenced the analysis, the results and the discussion.

3.7.1 Communication – socially and culturally situated

Communication, in Latin communicare, is defined to make common, have in common, or to share (Aschehoug & Gyldendals, 1985, 7, p. 176), and is integrated in cultural and social contexts. The anthropologist Keesing (1985, p. 68) restricted the term culture to an ideational system. 'Culture in this sense comprises systems of shared ideas, systems of concepts and rules and meanings that underlie and are expressed in the ways that humans live.' Culture refers to knowledge distributed among individuals in communities. In line with this Rommetveit (1992) underscored that learning a language includes learning the society's basic ideas that are embedded in the language. Watzlawick, Bavelas and Jackson (1967, p. 21) wrote: 'All shared information presupposes semantic convention.' Furthermore, Kleinman (1992) stated that names and meaning given to bodily problems and pain are developed on the basis of the cultural context. According to Keesing (1985) sharing meanings is a social

process, as for instance, treatment. Thus, shared meanings are created and sustained between people, in our case, between patients and physiotherapists. Cultural knowledge, for example, knowledge about chronic muscle pain, is socially situated (Keesing, 1985).

3.7.2 Systems theory – underpinnings

The chosen perspective of communication is based on the work of the natural scientist and anthropologist Gregory Bateson and his co-workers, mainly in the period from 1952–1962, at the Mental Research Institute in Palo Alto. They investigated and enhanced the basic knowledge of communication as well as the knowledge of communication within families, also called family systems. Watzlawick et al. (1967) described and further developed the perspectives of systems theory. The systems theory of communication was influenced by the general system theory, developed by Bertalanffy, and theory of cybernetic, i.e. self-regulating systems, developed by Wiener (Hårtveit & Jensen, 2004). Based on the general system theory, a system is defined as 'a set of objects together with the relationships between the objects and between their attributes' (Watzlawick et al., 1967, p. 120). The introduction of the general system theory encompassed a shift of problem-explanation models from the mechanical cause-effect model within the frame of the natural science to the systemic model that included the reciprocal influence between the single units and the whole system (Ølgaard, 1991; Hårtveit & Jensen, 2004). With regard to humans, this led to a shift from seeing symptoms as individual attributes to see them as dependant on the reciprocal influence of interaction between individuals (Watzlawick et al., 1967). A shift of explanations of causes leading to psychological diseases and problems followed – from inner conflicts to relationship problems. Hoffman (1985, p. 387) emphasised the shift of perspectives from the aetiology of the problem to the meaning of the problem. She said: 'The problem is the meaning-system created by the distress, and the treatment unit is everyone who is contributing to that meaning-system'. This position was supported by Harlene Anderson and Harold Goolishian, who will be presented later.

3.7.3 A systemic perspective on communication

The systemic perspective on communication emphasises the reciprocal influence between participants in the relationships, and encompasses the observable manifestation of the relationship. The terms communication, interaction, behaviour and acts are used synonymously as messages of meaning (Watzlawick et al., 1967). Watzlawick et al. (1967) touched upon the syntactical, the semantic, and the pragmatic area of communication, but they particularly dealt with the pragmatic aspect, i.e. the behavioural effects of communication, which embraces the words and the words' non-verbal concomitants, as well as the body language. They stated that it is impossible to not communicate, as 'all behaviour in an interaction situation has message value, i.e. is communication,' (Watzlawick et al., 1967, p. 48–9). Activity, inactivity, words and silence have message value. Further, they described communication as 'verbal, tonal, postural, contextual, etc all of which qualify the meaning of all the others' (Watzlawick et al., 1967, p. 50). They pointed to the importance of clarifying the communication contexts, which appeared as a prerequisite for the interpretation of messages. 'A phenomenon remains unexplainable as long as the range of the observation is not wide enough to include the context in which the phenomenon occurs' (Watzlawick et al., 1967, p. 21).

Communication encompasses aspects of content and relationship. In the studies, the content aspect consists of the selected tasks of the treatment based on the examination, the ongoing assessments, and the aim of treatment. The relationship aspect includes the way the physiotherapist and the patient relate to the task, and to each other. The connection between the content and the relationship is of importance. The relationship aspect, the meta-communicative aspect, points to the interpretation of the content aspect. The relationship aspect can be expressed verbally and non-verbally. The latter includes, for instance, smile or annoyed tone of voice. Expressions of the relationship indicate how I see myself, how I see the other, or how I see the other seeing me.

The participants in relationships create preconditions for communication characterised by patterns of equality or difference, as well as the sustenance of the patterns. Watzlawick et al. (1967, p. 70) stated: 'All communicational interchanges are either symmetrical or complementary, depending on whether they are based on equality or difference.' Symmetrical communication involves that the participants act in similar ways. In complementary relationships one participant complements that of the other by acting differently. Relationship systems or communication patterns between individuals or groups tend to escalate. The participants in a symmetrical relationship may escalate the pattern by acting competitively, and the participants of a complementary relationship may strengthen their superior and corresponding inferior positions. However, communication is dynamic. Bateson pointed to the importance of breaking or reducing negative escalation by introducing elements from the other relationship modes (Ølgaard, 1991). In treatment, the situation appears restricted if both the patient and the physiotherapist express and sustain different opinions about, for instance, the symptom's meaning. If the therapist varies her/his approach by exploring the patient's statements, moments of symmetrical communication may appear, and influence the establishment of a more flexible relationship. Analysis of the modes of a particular relationship is based on the punctuation of the sequence of the events. Watzlawick et al. (1967) stated that punctuation organises behavioural events, and is therefore vital to ongoing interaction. The described aspects of communication are the basis for the analysis of study III.

3.7.4 Narrative approaches

In family therapy in the 1970s, the systems theory was a basis for many types of treatments. In the 1990s the new wave, the narrative or story approach, emerged. This approach also comprised different types of treatment, such as the collaborative linguistic system approach developed by Anderson and Goolishian. In tune with the times, the approach changed name from family therapy to therapy with problem-determined systems, to therapy with problem organising and problem dissolving system to the collaborative linguistic system approach (Hårtveit & Jensen, 2004). In

study I, in line with Anderson and Goolishian (1992), I applied the concept 'the not-knowing' approach, which points to the therapist's attitude of the collaboration with the patient during treatment. The 'not-knowing' approach, i.e. the collaborative linguistic system approach points to therapeutic systems as language and meaning-creating systems, and problem-organising and problem-dissolving systems. The therapist is a participant-observer and a participant-facilitator of the therapeutic conversation, or as, in our case, the NPMP treatment. The purpose of the therapist is to create space for dialogues – the collaborative exploration of the patient's experiences and meaning – by asking questions from a curious position of 'not-knowing', rather than from an understanding based on prior theoretically formed truths and knowledge. The therapist's curious not-knowing attitude and the different understandings of the therapist and the patient may facilitate the emergence of unspoken narratives and change of agencies, as described in study I. Andersen (1992) understood therapeutic talk as a search for new descriptions, new understandings and meanings, new nuances of words, and finally, new definitions of oneself. He was also influenced by the collaboration with Bülow-Hansen. She adjusted her grip in accordance with the tension of the patient's muscle in order to create a movement variation.

The above approaches were also influenced by the theoretical perspective of social constructivism (Hårtveit & Jensen, 2004). Gergen and Kaye (1992) emphasised the collaborative relationship between the client and the therapist, and the construction of useful narratives in order to enable the client to move beyond the ongoing crisis. They pointed to the utility of constituting a multiplicity of self-narratives, and not only replace a dysfunctional narrative with a more functional one. By not committing oneself to one self-narrative, the construction of narratives may remain fluid and open to variable situations and relationships. In Paper I, I applied this approach in the discussion of the results.

4. Material and Methods

The long-term NPMP approach for patients suffering from chronic muscle pain of back and/or neck is at the heart of this thesis which encompasses studies of change and communication. Qualitative research intends to explore and describe social phenomena or events, as experienced by individuals in their natural settings (Malterud, 2001a; Polkinghorne, 2006). In these studies, qualitative data were produced from different sources from May 2003 to January 2008.

4.1 Theoretical underpinnings

Qualitative research is bound up with particular sets of assumptions about the basis of knowledge, epistemology (Kvale, 2007; Lyons & Coyle, 2007). The theoretical perspectives that underpin these studies are mainly influenced by the phenomenological perspective of Merleau-Ponty, and to a minor degree by the social constructivist perspective. As described above, the phenomenological perspective points to knowledge built on the subject's direct experience of the world, i.e knowledge is situated and based on a variety of relationships (Kvale, 2007; Merleau-Ponty, 2004). Social constructivism is defined as the assumption that the world – a wide definition – or some phenomena of the world – a narrow definition – are products based on collective activities (Nortvedt & Grimen, 2004). In these studies, in accordance with Nortvedt and Grimen, the narrow definition is applied. At this minimum level, the social constructivist must accept the existence of the phenomenon, and that the clarification of the existence or the attributes or the actions of the phenomenon depends on the social agents' perception. The core of constructivism is based on the movement from existence to cognitive activities of perception (Nortvedt & Grimen, 2004). The relationship between realism and social constructivism is not incompatible, as a 'narrow' social constructivist also accepts the existence of phenomena independent of our perception. The social constructivist perspective includes that our understanding of the world and ourselves is built up

through social processes, especially through linguistic interaction as products of particular cultural and historical contexts (Lyons & Coyle, 2007; Nortvedt & Grimen, 2004). Language is understood as acts, and encompasses expressions and realizations of certain ways of being in the world (Schwandt, 2000). Schwandt (2000, p. 198) states that social constructivist views include 'an affinity with the notion of the coming into being of meaning.' Hence, interpretation and negotiation of the meaning of the social world are in focus Kvale (2007). In these studies, the above perspectives seem to complement each other.

4.2 Design – longitudinal multiple case study

A longitudinal multiple case research design was chosen. Eleven cases were monitored from early treatment and six to nine months onwards. At the end of the project the patients' number of treatments varied from 16 to 25, average 20.

The intention of case study strategies is to catch complex social phenomena within real-life contexts. Hence, the investigated case is located in a situation, embedded in physical, cultural, social and historical contexts (Yin, 2003; Stake, 2002; Stake, 2005). The studies were situated in a NPMP treatment context. The strength of the multiple case study design is to deal with a variety of data and to trace changes over time (Yin, 2003).

Main data were as follows:

- Transcripts of audio-recorded individual interviews
- Transcripts of video-recorded treatment sessions
- Patients' personal notes/reflective notes
- Transcripts of audio-recorded focus group interview

Data used as support were:

- Field-notes written during and after audio-recorded individual interviews and focus group interviews, as well as observation and video-recordings of treatment sessions

Beyond being specific and unique, the case is a bounded system (Stake, 2005; Yin, 2003). In these studies the NPMP treatment course was defined as a case, which included the patient and the physiotherapist. The changing process, the therapeutic relationship, and the NPMP approach appeared as a bounded system. One case comprised data from the following sources: the introductory patient interview, four subsequent video-recorded sequences and three/four personal notes of patients with intervals of one to two months, the final patient interview and interview with the physiotherapist.

Yin (2003) recommends to choose theoretical perspectives as a guiding frame when case studies are designed and conducted. I applied the theoretical perspective of NPMP as an overall guiding frame. Additionally, in accordance with the research questions and analyses of the different studies, I drew on assumptions from the theoretical perspectives of communication and narrative approaches.

4.3 Participants

We applied a purposeful sampling strategy (Patton, 2002; Malterud, 2003), by selecting information-rich cases in order to learn about issues of importance to the purpose of the study. Thus, we aimed for a variety of age, gender and clinical experience of the physiotherapists, and a variety of age, gender, occupation, work and family situation of the patients.

The logic underlying the use of multiple-case studies is that each case must be carefully selected so that it either predicts similar results, a literal replication, or dissimilar results, a theoretical replication. Different types of replication facilitate the development of a rich theoretical framework (Yin, 2003). In these studies the cases were carefully and pragmatically selected, in line with the purpose of the thesis, available time and economic resources. We predicted similar results, i.e. improvement of muscle tension and restricted breath, and dissimilar results, variation of improvement. The sample originally consisted of six physiotherapists and twelve

patients recruited from May 2003 to November 2005. The sampling was done in two steps. First, I selected one physiotherapist, who selected two patients. Second, I selected five physiotherapists, who selected two patients each.

4.3.1 Physiotherapists

I selected the physiotherapists based on the following criteria: being qualified as NPMP specialist, having more than ten years of clinical experience, and holding a job in an outpatient clinic. The six physiotherapists, five females and one male, were experienced clinicians with a postgraduate education in Norwegian PsychoMotor Physiotherapy. Their clinical experience ranged from 20 to 46 years. The number of female and male physiotherapists corresponded to the registrations of Norwegian Physiotherapist Association in 2009, where 90% NPMP specialists were females. Their age ranged from 44 to 67 years. They were recruited from three different outpatient clinics in the same city in the western part of Norway, due to practical and economical reasons. The physiotherapists were recruited from outpatient clinics, due to the fact that approximately 68% NPMP specialists seem to practise in outpatient clinics (Information from Norwegian Physiotherapy Association, March 2009).

4.3.2 Patients

In Norway, physicians diagnose and refer patients to NPMP treatment. As a first step of NPMP treatment, on the basis of the NPMP examination and the illness narrative, the physiotherapist assesses the patients' potential for change. In these studies the participating physiotherapists selected two patients each based on the following inclusion criteria: diagnosis of chronic muscular pain located to the back and/or neck of more than six months duration, completed NPMP examination with findings that indicated potential for functional change, and no history of psychosis (The ICD-10, 1992). The limit between sub-acute and chronic muscular pain is three months according to the IASP (Lindblom et al., 1986). Still, we decided on a limit of six months, due to the fact that the duration of chronic muscle pain for female patients

that attend NPMP treatment are on average more than nine years (Breitve et al., 2008). Patients with both back and/or neck pain were included, based on the NPMP understanding that movements of the back and the neck are interconnected. We did not emphasise a detailed description of the assessment of the completed NPMP examination, as our focus was treatment over time.

Ten female and two male patients agreed to participate. To my knowledge, only one invited patient decided to not participate. The distribution of gender was in line with previous studies (L. Aabakken et al., 1991; Breitve et al., 2008). One male terminated treatment after the first video-recording, due to a change of residence. The remaining eleven patients were between 22 and 47 years old, average age 36. They conveyed stories of pain within a range of 1 to 20 years, average 8, 8 years. Their work status: Two were students, and seven were working in health services, social care or teaching. Of these seven, three were on partial sick leave, and one was on long-term sick leave. The tenth patient used to work within the health service, but now she received disability benefits. The last patient was unskilled, and on long-term sick leave.

4.4 Data

We generated qualitative data from different data sources.

4.4.1 Qualitative research interviews and applications outside interview contexts

The qualitative research interview is a construction site of knowledge production, as knowledge is constructed in and through an interpersonal relationship, co-authored and co-produced by the interviewer and interviewee (Kvale, 2007). In line with this, Mishler (1986) understands interviews as jointly produced discourses. When talk is locally and collaboratively produced, interview data emerges as just one possible version (Rapley, 2001). Kvale (2007, p. 21) stated that ‘the interview gives access to the manifold of local narratives embodied in storytelling and opens for a discourse

and negotiation of the meaning of the lived world'. A narrative is defined as a life story about a specific significant aspect of a person's life (Chase, 2005). Personal narratives refer to talk organized around consequential events (Riessman, 1993). In these studies, I applied these perspectives beyond the research interview to the observation and the video-recording of the treatment session, and emphasised descriptions and narrative accounts of lived experiences as well as construction of new stories.

4.4.2 Semi-structured individual interviews of patients and physiotherapists

The purpose of the qualitative research interview is to obtain knowledge of the phenomenon investigated, on the basis of the subject's descriptions of experiences and points of view. In these studies the purpose of the interviews with the patients was to obtain knowledge of their opinions about and experiences of symptoms of pain and bodily reactions, as for instance tension, in connection to stories of life before and during the monitored treatment period. The purpose of the interviews with the physiotherapists was to explore their opinions about and experiences of the patient's ability to undergo change, and the physiotherapist's opinion about their own contribution to change during treatment.

Semi-structured interviews were applied. This type of interview consists of sequences of themes to be explored and suggested questions. The interview is open to shifts of the sequences of the themes as well as the form of the corresponding questions, in order to follow up the subjects' given answers and told stories. Interviews are guided by interview guides, aiming to facilitate spontaneous and rich descriptions (Kvale, 2007). Constructing the guides, I focused on themes and specific corresponding key questions of what, why and how. However, starting out with the specific questions in the first interview, I experienced the need for a more flexible approach, in line with the specific situations. I reformulated the questions into themes of exploration. Mishler (1986) argues that standard questions for the interviewees are not a credible

basis for analysis and interpretation. Knowing the actual asked question and the actual answer, enables us to address the meaning of the conversation.

4.4.3 Interview guides – main themes

Main themes from interview guide of introductory interview with patient

- Experiences and narrative accounts of symptoms and bodily reactions before the monitored period of the treatment course
- Coping strategies for symptoms and problems in different contexts of life
- Ideas about how change can emerge during treatment
- Ideas about how potential change may influence life contexts
- Ideas about how communication between the patient and the physiotherapist may influence potential change

Main themes from interview guide of final interview with patient

- Experiences and understanding of change of symptoms and problems
- Experiences of the influence of movement as well as the influence of the reflection on movement during the changing process
- Experiences of the influence of change on life contexts
- Experiences of the influence of therapeutic communication on change
- Ideas about selection of headline when comparing the changing process to a narrative process
- Experience and influence of the use of personal note during the changing process
- Experience of being video-recorded

Main themes from interview guide with physiotherapist

- Description of and stories about the patient's symptoms and bodily reactions before and during the monitored period of the treatment course
- Description and assessment of each patient's NPMP examination, and it's prediction of possibilities of change

- Understanding of connection between patient's life story(ies) and assessment of examination
- Experience and facilitation of each patient's changing process, including demanding as well as relaxing situations
- Naming the patient's narrative accounts of life and the changing process

4.4.4 The physical context and technical equipments

According to the participants' requests, the interview took place at the outpatient clinic, in a small library at the University or at the patient's place of work. An audiotape-recorder, Sony, and an extra microphone, Shure Prologue Model 16L-LC Microphone, were applied.

Patients: Of the eleven patients, five were interviewed in the outpatient clinics, five in the library at the interviewer's working site, and one did the first interview in the library and the second in her own office.

Physiotherapists: The interviews of five of the six physiotherapists took place at their outpatient clinic, and one in the library at the University.

4.4.5 Interviewing

In line with recommendations (Kvale, 2007), at the start of the interview I briefed the interviewee about the purpose of the interview, the equipment, the available time, and the right to not answer questions. Further, based on advices from the literature (Patton, 2002; Kvale, 2007) I aimed at creating a safe atmosphere by listening attentively and enacting accepting while I encouraged the interviewees to explore and express descriptions of experiences and narratives. I tried to be curious and sensitive to what was said, and to what was not said by listening to the content and the tone of their voice. Being sensitive to what was not said included, for instance, the patients' uncertain and vague descriptions of movements and tension. Taking into consideration the lived interview situation – the interviewee's voice and facial and

bodily expressions that accompany the statements – provides a richer access to the subjects' meanings (Kvale, 2007). Moreover, I searched to grasp how I contributed to the interviewees' perception of themselves, by being sensitive to their boundaries and their wishes to share experiences and opinions. Rapley (2001) emphasises the importance of understanding interview data as influenced by the interviewees' identity work. Searching for the suitable balance between distance and empathy became critical, in order to not encourage them to disclose experiences that they later might regret.

During the interview the researcher needs to choose how closely to follow the guide and how strongly to pursue an individual subject's answer, or new leads (Kvale, 2007). I emphasised the exploration of nuanced description of the investigated phenomena, and checked that the topics planned were covered. As suggested by Kvale (2007) I applied various strategies and questions to structure the dialogue, such as introduction question, direct question and silence. As an ongoing process I used interpretation question and presented short summaries of the interviewees' accounts or narratives in order to check if I did understand the answer as it was intended. Reaching an acceptable level of shared agreement, may appear as a process of meaning negotiation (Mishler, 1986). Practising ethical skills is important (Kvale, 2007). At the end of each session, debriefing was done concerning ethical implications of the produced knowledge.

In the interviews with the patients I often found it necessary to return to earlier elaborated themes, in order to further explore the subject's meaning. One patient stated to not talk easily. Another gradually clarified the name and meaning of her changing process as 'trying to find a new strategy' in contrast to 'the tensing muscle strategy'. Through the development of the discourse, terms take on specific and contextually based meanings (Mishler, 1986). At the end of the interview, I made an open question if there was anything more to add. They rarely had anything to add. I explored how the interviewee experienced being in the interview situation. The answers varied; i.e. experiencing the situation as not a problem, being confirmed,

feeling the audio-taping as a problem, and feeling unfamiliar with expressing themselves emotionally. Sometimes, when patients cried, expressed anger or shared painful narratives, I felt challenged to enact as researcher and not as therapist by being helpful. A few times during the interviews, I reminded the patients about their right to not answer questions, and accordingly changed the direction of the interview.

Interviewing each of the physiotherapists appeared as a smoother process. Their answers were mainly short and focused. The difference between the interviews with the patients and the physiotherapist seemed to represent the difference between themes based on own experiences of body and life, and professional themes connected to the other, the patient. I was aware the balance between acting as a researcher and a colleague. As interviewer I had a job to do, and did not initiate talk beyond the interview guide. However, I opened for comments on the interview situation. When the physiotherapists searched for terms to describe their own way of practicing, the physiotherapists mainly experienced the situation to be instructive. However, one commented to be worried, because she/he felt a need to defend her/his practice.

Altogether, I did 28 individual interviews, 22 with the patients and six with the physiotherapists. Each individual interview lasted approximately 60 minutes.

4.4.6 Focus group interview – physiotherapists

The purpose of the focus group interview was to open possibilities for the physiotherapists to explore, enrich and vary their experiences of aspects of the patient's changing process, i.e. how to facilitate change and cope with demanding situations. Focus groups interviews are defined as collective conversations or group interviews, that examine a particular set of social relevant issues, facilitate the exploration of collective memories and shared stocks of knowledge as well as the creation of multiple meanings and perspectives (Morgan, 1997; Krueger & Casey, 2000; Kamberelis & Dimitriadis, 2005; Kitzinger, 2006; Markova, Linell, Grossen, &

Orvig, 2007). The focus group discussion is a situated activity, which relies on historically and culturally shared social knowledge (Markova et al., 2007), and takes advantage of the richness and complexity of group dynamics (Kamberelis & Dimitriadis, 2005; Markova et al., 2007). The focus group interview may take place at different stages of the research process (Morgan, 1997; Markova et al., 2007). In this research, the focus group interview took place subsequent to the video-recorded treatment sessions and the last individual interviews, and as such was the final reflection or the meta-dialogue on the specific treatment courses.

The group consisted of the six physiotherapists. The number of participants is in line with recommendations in the literature, which varies between 4 and 12 (Morgan, 1997; Krueger & Casey, 2000; Kamberelis & Dimitriadis, 2005; Kitzinger, 2006; Markova et al., 2007). The group must be small enough for everyone to have an opportunity to share insights, and large enough to provide a diversity of perceptions (Krueger & Casey, 2000). Participants are selected on the basis of homogeneity and sufficient variation to allow for contrasting opinions (Krueger & Casey, 2000). The physiotherapists were all NPMP specialist, but clinical experience, gender and age varied. Two researchers, one moderator and one co-moderator participated, in line with recommendations (Krueger & Casey, 2000). I had no experience as moderator of research groups, only as leader of treatment groups. Målfrid Råheim (MR) participated as an experienced research assistant moderator. Aiming to give time to each participant to share her/his opinions without any delay, I organized the group discussion in a rather structured way. In verbal and written forms the participants were invited and informed that experiences about change and communication from the specific treatments were the departure of the discussion. At the start of the interview, in order to facilitate the discussion, I requested each participant to reflect a few minutes in silence and note three keywords of themes or stories they wanted to share with the group. The participants were then supposed to contribute with their reactions and experiences. The aim of the focus group is to talk to each other rather than the researcher (Kitzinger, 2006). The discussion was based on turn-taking. One

physiotherapist volunteered, then the next one, and so on. I was responsible for posing questions and pushing the group forward. Almost immediately, I realized that the selection of three themes was too time-consuming, and made a shift to one. Near the end, based on the emergent themes of the ongoing discussion and the earlier individual interviews with the physiotherapists, I invited the physiotherapists to deepen the discussion of the question: 'How is it possible to be with the patient at her/his level of experience and understanding, and concurrently facilitate change?' This part of the discussion progressed spontaneously, and appeared as a meta-dialogue on expressed experiences and opinions of the first part of the interview. During the interview, the co-moderator made notes, posed clarifying questions, and summoned up for comments at the end.

The interview is recommended to be conducted in environments conducive to sharing, listening and responding (Krueger & Casey, 2000). The interview took place in a spacious meeting room at the University, in the afternoon. The participants selected their seats around a square table filled with fruit, biscuits, coffee, tea, and an audio-recorder. To be on the safe side, a second audio-recorder was placed on a table outside the sitting circle. The focus group lasted two and a half hour.

4.4.7 Observations and video-recordings: Treatment sessions

Observations and video-recordings of treatment sessions were undertaken in order to examine, first, patients' changing processes of self-narratives, movements and breaths, and second, communication between the patient and the physiotherapist. The purpose of observational data is to describe the settings, the activities, as well as the meaning of what was observed from the perspective of those observed (Patton, 2002). Angrosino (2005) points to observational research as a matter of interpersonal interaction. I selected first-hand experiences in order to better understand and capture the physiotherapeutic context of change and interaction. In these studies the specific NPMP treatment courses at the different outpatient clinics were defined as the field for naturalistic observation (Patton, 2002). Observer involvement varies (Patton,

2002). I decided to act as an onlooker, visible for the physiotherapist and the patient. I intended to not involve myself in their conversation or actions, but observe from the best possible distance. However, observers affect what they observe (Angrosino, 2005). In order to capture the richness of the data, a video-camera recorder was used. Video-recordings do capture the complexity of particular events, provide access to analysis of social actions and activities – based on visual and vocal aspects of interaction – and enhance the understanding of how the body features combine with talk in the sequential production of social actions (Heath, 1997).

Planning the studies I made a tentative observation guide with the following main themes:

- Experiences of and opinions about pain, movement and breath
- Communication/interaction and change

At the different clinics, the equipment of the physiotherapists' office was fairly similar, and consisted of a bench, a stool, a few chairs and a desk with a computer upon. The size of the offices varied. The treatment context was complex, and included sequences of shifts between conversation, instruction of movements in different positions, and massage in different positions. The handheld camera, Digital Video Camera recorder Sony Model NO DCR PC120E, with additional microphone and long cord, as well as a flexible support, Velbom Unipod Up-40, increased my possibilities to record the treatments from different angles.

In the first part of the monitored treatment, my focus of observation was broad and tentative, and encompassed different types of emerging change, as the patient's experiences of and reflection on symptoms, movements and breath. Gradually, I narrowed my focus to the limited and specific occurrences of improvement of movements and breath, and then to the patients' vague experiences of movements and breath. Patton (2002) suggests us to observe what does not happen. Although my main focus was on different types of change, I concomitantly kept in mind the

interaction of the participants and made sure, as far as possible, that the camera captured both verbal and non-verbal communication. The option of focus distinguishes various processes sequentially (Patton, 2002). In short parts of some video-recordings, the camera angle and the position of the participants did not fit. Particularly, in the narrow rooms, I found it difficult to avoid positions where the participants blocked the view of each other. Parts of two video-recorded sessions were useless, due to noise from the outside. In one specific situation, a patient started crying, and I withdrew. The narrow rooms restricted my mobility, and made me sometimes feel intrusive.

The participants, the physiotherapists and the patients, reacted in different ways towards the video-camera. The majority of the physiotherapists experienced the situation equivocally, a slight dislike and a challenge. Two physiotherapists expressed a nearly constant unpleasantness and a feeling of being uncovered. Based on my field notes from these situations, I listened to and tried to diminish their uneasiness by discussing alterations of my position in the room. Also, we discussed professional themes. Implicitly, we renegotiated their decision to participate, and explicitly, I reminded them on their right to withdraw from the research process. All the patients experienced the video-camera as a disturbing element in the first recorded session. A few found the conversation sequences more demanding than the movement sequences, as they were not used to reflect on their bodily reactions. In later sessions, they forgot the camera, except for a few episodes. One noticed the camera the moment she started crying. My presence and use of camera seemed to influence the physiotherapists more than the patients.

Observing and video-recording 44 treatment sessions – four sessions of each of the eleven treatment courses – opened my possibilities to analyse data from treatment in practice.

4.4.8 Personal notes – patients

Personal notes, named reflective notes in study I, were applied in order to obtain the patients' own descriptions of their experiences of symptoms, bodily changes and communication over time. In general practice, illness diaries have been used interactively in order to expand communication about symptoms (Stensland & Malterud, 1997; Stensland & Malterud, 1999; Stensland & Malterud, 2001).

For the three last video-recorded sessions, the patients were supposed to write three notes each, based on their experiences from the previous week. The notes were based on open-ended questions that were determined in advance. The first questions corresponded with the questions physiotherapists regularly pose in the first part of the treatment session. The main themes were:

- Experiences of and opinions on symptoms of pain and/or bodily reactions in different situations
- Coping strategies
- Selection of name for symptoms or bodily reactions beyond the name of the disease
- Selection of name for periods with less pain or bodily reactions
- Communication about pain during treatment

The patients decided the length of their personal notes. The following video-recorded sessions, they were supposed to bring the notes, and to discuss selected themes for approximately ten minutes with their physiotherapist. They all discussed themes from the notes, but in various ways. Some physiotherapists asked the patient if they wanted to discuss specific themes from their notes, while others touched the themes by asking about their experiences from the last week. Sometimes, patients forgot to write or bring their notes on the requested day. However, they all delivered them later. Some patients commented verbally or in written form their lack of understanding with regard to unanswered questions. One patient systematically left the questions

about meaning of symptoms unanswered, and told that she disliked this task. Others conveyed that the writing process appeared as a mean to discover their pattern of acting, as in study I. One physiotherapist requested a copy of the notes, as she used the notes as part of the treatment evaluation. In agreement with her two patients, this was accepted. Altogether the eleven patients wrote 40 personal notes. Seven patients wrote four notes, one more than they were supposed to do.

4.4.9 Field notes – researcher

During the interviews or the video-recorded sessions, the purpose of writing field notes, i.e. keywords in order to not disturb the participants, was mainly to grasp incomprehensible and unexpected action or activities. Subsequent to the interviews and the video-recorded sessions, the purpose was to capture the atmosphere of the specific situations, as for instance the therapeutic relationship, the participants' appearances and movements in the room, my own impressions and feelings, as well as potential ideas for analysis and use of theoretical perspectives. Malterud (2003) states that in studies built on data from audio-recorded interviews and video-recorded treatments sessions, the researcher's field notes are a tool to capture impressions and reflection. Ahead of or subsequent to treatment sessions, I discussed themes from the field notes with each physiotherapist. Some discussions were audio-recorded, depending on the availability of the camera and the spontaneity of the discussion. The field notes were part of the research material, and were used as support data. Altogether, I made 73 field notes that encompassed six notes during and after individual interviews with the physiotherapists, 22 notes during and after individual interviews with the patients, 44 notes during and after video-recorded sessions, and one note after the focus group interview. Råheim made a comprehensive field note during the focus group interview.

4.4.10 Data applied in the different papers – an overview

Paper I

Main data:

- Data based on four individual interviews with two patients, an introductory and a final interview with each
- Data based on one individual interview with one physiotherapist
- Data based on eight video-recorded sessions from two treatment courses, four sessions from each treatment course. Two patients and one physiotherapist participated
- Six reflective/personal notes, three from each patient

Support data:

- Five field notes during and/or after the interviews with the physiotherapist, and the two patients, as well as eight field notes during and/or after the eight video-recorded treatment sessions; altogether 13 field notes.

Paper II:

Main data:

- Data based on 18 individual interviews with nine patients, an introductory and a final interview with each
- Data based on five individual interviews with five physiotherapists
- Data based on 36 video-recorded sessions from nine treatment courses, four sessions from each treatment course. Nine patients and five physiotherapists participated

Support data:

- 34 reflective/personal notes, seven patients wrote four and two patients wrote three notes.

- Five field notes during and/or after interview with five physiotherapists, 18 field notes during and/or after interviews with nine patients, and 36 field notes during and /or after the video-recorded sessions, altogether 59.

Paper III

Main data:

- Data based on eleven individual final interviews with eleven patients
- Data based on six individual interviews with six physiotherapists
- Data based on focus group interview with six physiotherapists
- Data based on 44 video-recorded sessions from eleven treatment courses, four sessions from each treatment course. Eleven patients and six physiotherapists participated
- 40 reflective/personal notes

Support data:

- Six field notes during and/or after individual interviews with six physiotherapists, eleven field notes during and/or after individual interviews with eleven patients, 44 field notes during and/or after the video-recorded sessions, two field notes during and after the focus group interview with the physiotherapists, altogether 63 field notes.

4.5 Analysis

4.5.1 Transcribing

To transcribe is to make a translation from one narrative mode to another, for example from an oral to a written discourse (Kvale, 2007). I transcribed the audio-recorded individual interviews and the focus group interview, as well as the video-recorded sessions in line with Kvale's question: 'What is a useful transcription for my research purposes' (2007, p. 98). In accordance with the research questions, my

purpose of transcribing, as the first step of analysis, was to facilitate further analysis of themes connected to processes of change and interaction. Transcription is itself interpretative constructions (Mishler, 1986; Kvale, 2007). In order to know the material in-depth I did the transcription myself.

Interviews: From audio-recorded dialogues to text

Shortly after the interviewing, first, I listened to the tape as a whole, in order to recapture the atmosphere of the context, as well as the issues of the conversation. Second, I transcribed in an ongoing process the individual interviews and the focus group interview. The style was slightly modified verbatim (Malterud, 2003). The audio-tape gives a de-contextualised version of the interview, as it includes no visual aspects of the situation, neither the setting, nor the facial and bodily expressions of the participants (Mishler, 1986; Kvale, 2007). However, by studying tapes of conversation it is possible to focus on details (Silverman, 2000). I selected a coherent transcription – excluded repetitive words and sounds such as 'hm' – but emphasised to keep the meaning of the text. Capturing our fragmented way of talking by using a verbatim transcription style may make the participant sound foolish (Malterud, 2003). Thus, transcription involves ethical issues (Kvale, 2007). I labelled my questions by writing them in italics. The atmosphere of the dialogues was captured by describing within brackets, the participants' tone of voice, sighs, heavy breathing, and emotional expressions of sniff and laughter. Pauses were described as long or short. Mainly, I escaped problems with overlapping talk, by letting myself relax and not interrupt the other.

Transcribing the focus group interview was more demanding than the individual interview, as I had to carefully listen to and label the voices of the different participants.

Treatment sessions: From video-recorded dialogues to text

The transcriptions of the video-recordings were based on the intention to capture steps of bodily change and change of interaction, including the verbal and the non-

verbal dialogues. However, transcriptions from pictures and expressed words to text reduce the research material (Kvale, 2007). I transcribed all the video-recordings, but in a selective way, due to the large amount. Erickson (1982) recommends looking through all video-recordings to get a view of the whole, then to search for gradually shorter limited sequences for more detailed analysis. I looked through each video-recorded session many times, and tried to keep an open mind for emerging themes of the experience of the body as well as the therapeutic relationship. The video-recordings reflected the structure of a treatment session as different phases; the introductory conversation phase, the middle phase of movements and massage as well as the emerging reflection based on the patient's experiences of movements and massage, and the final conversation phase. The conversation phases took place mainly in sitting positions, while movements and massage took place in different positions. I transcribed each video-recorded session in line with the unfolding of the treatment and within headings of the above mentioned main phases. The time of each sequence was labelled.

In the introductory and the final phases the conversation between the patient and the physiotherapists was transcribed slightly modified verbatim in line with the individual interviews. Transcribing the main phase of movement and massage, I structured the transcriptions into subsequent sequences on the basis of the patient's shifting positions, i.e. standing position, sitting on the stool/the bench, and prone- and back-lying position on the bench, and emphasised a not detailed transcribing style. Within each sequence, I transcribed the activity of the patient and the physiotherapist, and highlighted moments of change. I transcribed how the physiotherapist guided the movements of the patient through verbal instructions and touch, and how the patient moved in reply to the guidance. Transcribing the massage sequences I described the physiotherapist's touch and grip, as well and the patient's reply through her/his way of moving and breathing. Concomitantly, I transcribed the verbal dialogues integrated into the movements and the massage. Outstanding non-verbal gestures and tone of voice, as for instance uncertainty, was described in brackets. As a last step of

transcription, on the basis of the actions of the participants each sequence was labelled with a theme, as for instance exploring and improving balance in standing position. Short sequences of talk disconnected to treatment, or sequences of dressing and undressing were omitted or summarised in a sentence.

Later, on the basis of the analysis of the whole transcribed treatment courses, extracts of selected sequences were reviewed and transcribed in detail in order to capture change of narratives in the making (study I) and the development and the dissolving of demanding episodes of communication (study III).

4.5.2 Analysing – the core of the data

The case report was the core of the analysis. First, we built two case reports (study I), second, nine (study II), and altogether eleven (study III). Each case report summarised one treatment course, and was based on analysis of data from the following data sources:

- Introductory interview with the patient
- Four subsequent video-recordings of treatment sessions with intervals of four to eight weeks
- Three or four personal notes of patients made ahead of the monitored sessions
- Final interview with the patient
- Interview with the physiotherapist

The field notes were not systematically analysed, but applied as support data. Data from the focus group interview with the physiotherapists was not included.

The analysis of the cases included shifts between analysis of single cases and analysis across cases. In study I, for instance, first, I analysed the two single cases, then I accomplished a cross-case analysis of the two cases. Practising analyses of long-term treatment, I continually had to swap attention between the different types of emerging data. Presenting the analyses, I hold on to a more straight line of near chronological order. First, I describe the analysis of a single case that represents the analyses of all

the cases. Second, I describe the analysis across cases. Third, returning to the single cases, I explain the in-depth analysis of selected extracts. Fourth, grasping narratives of single cases over time, I present the application of a limited narrative analysis.

I Analysing a single case – building a case report

In qualitative research multiple questions can be posed to a text, and the different questions lead to different meanings (Kvale, 2007). Based on the research questions, different methods of analysis were selected in order to grasp the emergence of different types of change over time, the participants' experiences of and opinions about the different types of change and the dynamics of the therapeutic relationships. To analyse means to separate something into parts (Kvale, 2007). Analysis comprises shifts between de-contextualisation – elements that deal with similar issues across the material are separated from their original context, gathered and investigated more closely – and re-contextualisation – safety checks that the pattern of the gathered elements are not disconnected from the meaning of the original context (Malterud, 2001b). The purpose of the studies and the selected theoretical perspectives influence the analysis and enables the researcher to distinguish between essential and not-essential elements (Kvale, 2007). As an analytical starting point, the psychological phenomenological approach developed by Giorgi (1975; 1985) was an inspiration. The approach gives access to meaning embedded in the texts by emphasising descriptions of human experiences of the every day world as it is lived in specific situations. However, we applied the first two steps of the modified version of the approach, conceptualised as systematic text condensation by Malterud (1993; 2001b; 2003). The steps are, first, reading the material as a whole in order to obtain a sense of the whole, and second, identifying meaning units.

Analysing interviews: First, I read repeatedly the transcripts of the introductory and the final interview of the patient, as well as the interview of the physiotherapist, in order to obtain the sense of the whole. In line with the phenomenological perspective,

I tried to bracket my preconceptions and be open for emergent themes with regard to the specific research questions. Second, influenced by the NPMP theoretical perspective and the specific research question, I discriminated and labelled meaning units as themes. Implicitly, I searched across the text for themes of similarity. Each meaning unit of each interview was labelled with successive numbers, name of the interviewee, i.e. an identity-tag, and type of interview.

The next step was influenced by Kvale (2007). He emphasised that the meaning of the text is interpreted at three different contexts; self-understanding, critical common sense understanding, and theoretical understanding. These three contexts of interpretation, developed within the frame of the analysis of individual interviews, are further described. However, here the context of self-understanding is presented, while the others are presented within the analytic context of the focus group interview. The context of self-understanding includes the researcher's attempts to reformulate in a condensed form what the subject understands to be the meaning of her/his statements. The critical commonsense level transcends the reformulation of the subject's self-understanding. This level of analysis includes the interpretation of statements of the investigated phenomena or of the person who made the statements in contexts of more general knowledge. At the level of theoretical understanding, a theoretical frame for interpreting the meaning of a statement or a theme is applied (Kvale, 2007). In the studies, the analysis at the level of self-understanding, was based on questions posed to the text, as for example – what does the text tell about the subject's expression of pain – and consisted of condensation and transformation of the meaning unit from a first to a third person description. Then, within each interview, the similar meaning units were gathered and coded with a superior theme, as for instance pain coping strategies. By coding, we attach keywords to a text segment in order to permit later identification of a statement (Kvale, 2007). The coding processes were not straightforward. Repeatedly, I discriminated and gathered the meaning units in different ways, and consequently varied the superior themes until a satisfactory version was found. The different versions were continuously

compared with the transcripts. However, in line with Mishler (1986) I reminded myself to not consider the transcripts as the reality, but was constantly looking for meaning embedded in the context. Then, a condensed description of the meaning units within each of the superior themes was made, and finally a summary of the condensed descriptions of the different superior themes. Based on the summary of each interview, a narrative label was created, in order to grasp the core meaning, as for instance from a patient interview, 'you feel worn out, if you always bite tongue and exist for others'.

Analysing personal notes: Concerning the personal notes, I defined each specific question and the patient's answer, as a meaning unit. Hence, no further discrimination was made, with the exception of three long personal notes of the same participant. Each meaning unit was coded as a theme, and labelled with a unit-number, an identity-tag, and the number of the personal notes, from 1 to 3 or 4. Like the interviews and in line with Kvale's (2007) level of self-understanding, I transformed each meaning unit from first to third person experiences. Similar meaning units were gathered and coded with a superior theme, as for instance communication.

Analysing video-recordings: The transcribed text of each of the four video-recorded sessions of each case was read as a whole. The introductory conversation phase between the patient and the physiotherapist was analysed near up to the above steps of the analysis of the interviews, i.e. discriminating the text into meaning units, gathering and condensing similar meaning units and summarising the condensed descriptions. However, in this text, I emphasised how the participants co-created the dialogue as well as the topic of the dialogue. Each meaning unit was labelled with a theme that summarised the topic and the attributes of the dialogue. For example, exploring how the patient copes with pain at work. I labelled the meaning units with subsequent numbers, and an identity-tag common for the patient and the physiotherapist, and the number of the video-recording, from 1 to 4.

Based on the transcribed text with the discriminated and preliminary labelled sequences of the integrated moving/massage and reflection phase, questions were posed to the text concerning the emergence of different types of changes and variations of communication. First, I read through the sequences of each session, and gave particular attention to moments of emerging change with regard to, for instance, ways of moving and breathing. I labelled different types of change. Becoming aware of the patient's uncertainty with regard to sense the body, as for instance the difference between tension and relaxation of the thigh muscle, I added a marker of sensing and not sensing the body to the former ones. Some outstanding episodes of challenging communication were identified, and marked. Second, I summarised and transformed each sequence from first to third person descriptions. The summaries of each sequence were rewritten in many versions in accordance with the emphasis of the different research questions of the different studies. Repeatedly, I scrutinized the transcripts of each session, and also observed anew some sequences of the video-recordings in order to be in touch with the treatment in the making. Summarising each sequence, I tried to grasp and shortly describe which task the physiotherapist and the patient dealt with, as for instance exploring contraction and relaxation of the left thigh muscle. I emphasised how they dealt with the task. For example, the physiotherapist touched the patient's thigh muscle and instructed her/him to contract the muscle, and the patient contracted the muscle of the whole leg. Any observed emergent change or new knowledge experienced by the patient connected to repetitions of the task was described. For example, the patient discovered the experience of not being able to differentiate between tension and relaxation. Further, I highlighted how they communicated about the task, as for instance the physiotherapist initiates the communication through instruction and questions about the patient's experiences, and the patient contributes by attentive exploration.

Gradually, in order to understand development, different aspects of communication, as the emotional atmosphere of the relationship conveyed through tone of voice or movements and positions of the body, came to the foreground. Again, I scrutinized

the transcribed text searching for variations of communications and in particular demanding situations. In general, the analysis of the transcribed video-recordings included ongoing shifts between scrutinizing and labelling the transcribed text and slightly revising the summaries of the sequences in line with the different research questions, by adding new nuances. As a whole, each transcribed session was summarized, and a narrative label was created based on the intention to tentatively grasp the patient's self-narratives with regard to change.

Analysing interviews, video-recordings and personal notes over time: In order to capture change as well as variation of communication within each case over time, we applied the pattern matching technique (Yin, 2003). Pattern matching compares an empirically based pattern with a predicted pattern of specific variables defined prior to data collection (Yin, 2003). We predicted, prior to data production, some improvement of ways of breathing and moving (Paper II), as well as variations of communication during treatment (Paper III). Implicitly, the analysis of the study presented in Paper I, was influenced by the pattern matching technique. Based on the research questions, i.e. exploration of development of self-narratives, bodily change, and communication about change, the summaries of the sequences of each video-recorded session of each case over time were scrutinised. First, separated summaries were made in accordance to the different types of change, and then gathered as a whole. I created a narrative that searched to capture the treatment over time, as presented in Paper 1. The summaries of data of the interviews and the personal notes were included. Thus, the final summary, the case report, was built on analysis of summaries of data from the introductory interview with the patient, the four video-recorded sessions, the three to four personal notes, the final interview with the patient, and the interview with the physiotherapist.

II Analysing across cases

Based on the case reports, we applied Yin's pattern matching analysis by comparing patterns of change and communication across cases. We built a cross case synthesis, i.e. an aggregate of findings across multiple individual case

studies (Yin, 2003). Cross-case synthesis is relevant when a case study consists of at least two cases. In the studies, on the basis of constructing matrices (Malterud, 2003), we were able to draw conclusions across cases about patterns of different types of change and communication.

III Analysing video-recordings at micro-level – part process analysis

Based on the syntheses, we returned to and searched through the transcribed video-recorded sessions of the clinical encounters for extracts that illustrated patterns of self-narratives, i.e. being in touch with and being detached from the body (Paper I) and patterns of communication, i.e. seeking common ground – demanding negotiation process, ambivalence and uncertainty, and impatience and disagreement (Paper III). The selected extracts were micro-analysed by the application of the qualitative strategy, part-process analysis, developed by the psychologist and family therapist Anne-Lise Løvlie Schibbye (Løvlie, 1981; Steihaug & Malterud, 2002c; Iversen, Øien, & Råheim, 2008; Schibbye, 2009). The approach is described and extensively applied in Paper I and III. The part-process method is developed on the basis of clinical encounters, where the clinician understands that 'one must use oneself as a source of data' and that 'one influences constantly the phenomena one observes and in turn is influenced by these phenomena' (Løvlie, 1981, p. 264). Schibbye (Løvlie, 1981) argued that this personal knowledge is relevant for the clinical researcher. A part process is an interaction sequence – an analysis unit – that lasts as long as a specific theme is being discussed. The part process concept consists of elements of reciprocity and process (Schibbye, 2009). Part process analysis includes communication at three levels: Theme, meta-communication and definition of the relationship. The theme is often verbally communicated. The meta-communication encompasses non-verbal emotional expressions related to the theme. The theme and the meta-communication structure and define the relationship. Schibbye (Løvlie, 1981) intended to document changes in the way people live themes together, from repeating to changing the part process.

IV Analysing – from case report to narrative account

In study I – exploration of self-narratives over time – the two case reports were analysed as narratives, by the application of elements of narrative analysis. Narratives, first-person accounts, are produced through interaction and structured as stories with a beginning, a middle part and an end (Riessman, 1993). Interviews are often the starting point for narrative analysis (Riessman, 1993; Chase, 2005). Our narrative analysis was based on the interview with the patient as the beginning and the end of the story, while the video-recorded interactions between the physiotherapist and the patient, and the patient's dialogue with herself through the writing of the personal notes consisted of the middle part. Retrospectively, the self-narratives were understood and connected as a meaningful whole.

4.5.3 Analysing focus group interview

The focus group interview with the physiotherapists was analysed and included in study III. Analysing the interview, we applied the same analytic tools, as during the analysis of the data of the individual interviews. However, the analysis of the focus group was more demanding, due to the increased number of participants. First, I utilized the first two steps of systematic text condensation. After repetitious readings, I separated the text into two parts, in order to keep the overview. The main part consisted of six narratives or stories initiated and told by each of the participants followed by contributions of the group. The minor part encompassed the discussion based on the question 'How is it possible to stay with the patient at her/his level of experience and understanding and concurrently facilitate change'. Then I separated the whole text into meaning units, by tentatively coding the meaning units, as for example, 'change of movement depends on the physiotherapist's sensitivity'. Meaning units from the last part included themes, as for instance 'the importance of posing open questions'. In the narrative part, each meaning unit was labelled with successive numbers, identity tags of the initiator of the particular narrative, and the participating physiotherapists. In the last part, each meaning unit was labelled with number and identity tag of the participant. Next, I condensed each meaning unit in

accordance with Kvale's (2007) level of self-understanding. In order to reach an overview of the condensed meaning units, I gathered similar meaning units in groups and created superior themes, as for instance function, reflection, and breathing connected to the patient, as well as the physiotherapist's intentions and actions towards the patient, and the physiotherapist's experiences of her/himself during treatment. Then, the superior themes were separated in two. The first group that included the superior themes concerning patients' function, reflection and breathing was left behind. The second group that included the superior themes of the therapeutic relationship was further analysed.

I searched for the most protruding relationship themes. In order to capture the impact of each theme's multiplicity, I labelled with different colours the nuances of the different meaning units within and across the superior themes. Based on this labelling, I rebuilt and renamed the superior themes in accordance to their importance, in close cooperation with supervisors, researcher colleagues, and one of the participating physiotherapists. One main theme – seeking common ground – and minor themes of impatience and uncertainty emerged. These themes served as one of the cornerstones of the analysis presented in Paper III.

In line with Kvale's (2007) more general critical commonsense level and in accordance with the research questions, we analysed the selected meaning units of communication, which were part of the results in Paper III. At the level of theoretical understanding, we applied the chosen theoretical communicative perspectives in the discussion of the above themes, also presented in Paper III. The analysis at the critical commonsense and theoretical levels of the therapeutic relationship themes of the focus group interview serve as an example of analysis of data from individual interviews, personal notes, and video-recordings.

4.5.4 Analysing as communicative and pragmatic validation

Different contexts of interpretation correspond to different communities of validation (Kvale, 2007). The context of self-understanding, critical commonsense understanding, and theoretical understanding correspond to the interviewee, the general public and the research community, respectively. Kvale (2007, p. 125) stated: 'Interview interpretation need not only be tested communicatively by direct questions but also pragmatically by observations of the action consequences of the interviewer interpretation'. In these studies communicative and pragmatic validation appeared as coherent. The video-recorded sessions emerged as a pragmatic validation of the interviews. How the different types of communities promoted communicative and pragmatic validation of the analysis at the different levels are highlighted.

Context of self-understanding: With regard to the context of self-understanding, I shared the summaries of the final individual interviews with each of the two patients in company with the physiotherapist – participants of the study presented in Paper I – subsequent to the monitored period. They suggested no change of the interpretations. In the same study, the physiotherapist was supposed to look at and discuss her video-recorded experiences. Due to technical problems, she did not give it a second try. However, I shared summaries of selected sequences of each session of the video-recordings with the physiotherapist in order to discuss their relevance in the changing process. The sequences selected were adjusted in agreement with the discussion.

Ahead of the final interview with each of the nine participating patients of the study presented in Paper II, I offered to share with them the summary of the introductory interview. Five consented and validated my interpretation. Three declined. Two wanted to not be reminded of their vulnerable stories and pain experiences, and one expected no news. The last got no offer, due to the late date of her final interview. I offered the physiotherapists the possibility to observe, and discuss the video-recorded sessions of their own participation. One physiotherapist accepted, but only on the basis of my request to discuss interpretations of enactments of selected sequences of

one video-recorded session. Interpreting the sequence separated from the context of the whole session, disagreement occurred, but seeing the sequence in the context of the whole treatment session, we reached agreement and adjusted the analysis. Further, I presented part of the analysis – the discrimination of the patients into the two patient groups, the limited and the considerable change group (Paper II) – to each of the five physiotherapists. Four agreed momentarily. The fifth expressed surprise, due to one of the patient's examination scores. Discussing the treatment as a whole, we reached agreement. I did not offer the patients to watch their sessions, because I found it too time consuming and complex.

Critical commonsense understanding: Validation of the interpretation at the critical commonsense level included discussions with supervisors, colleagues within and across physiotherapy contexts, and patients in my own clinical practice. Four video-recorded sessions were randomly chosen, examined and discussed with two of my supervisors (S. Steihaug and M. Råheim). The different levels of the analysis were repeatedly discussed with my supervisors. At different times, I discussed the analysis with a researcher group of three physiotherapists from different professional contexts.

Theoretical understanding: The researcher community has the competence to evaluate the validity of interpretation within theoretical contexts, i.e. the validity of the theory for the area studied, and whether specific interpretations follow logically from the theoretical perspectives (Kvale, 2007). Reviewers, editors and readers of the published papers, and the audience to the presented work at conferences, found our interpretations based on the applied theoretical perspectives meaningful.

Summing up, the interview of each physiotherapist, and the final interview with each patient, and the video-recorded sessions of their specific treatment course, appeared as reciprocally validating. The personal-notes of each patient and the video-recorded sessions of their interaction with the physiotherapist included reciprocal validation. The focus group interview, the individual interview with the physiotherapists, and the video-recorded sessions included reciprocal validation.

4.6 Ethical procedures

The Regional Committee for Medical Research Ethics, Health Region West, Norway, approved the studies (references: 30.03 and 187.05). Norwegian Social Science Data Services was informed about and approved the projects (references: 15205 and 13316). The participants, twelve patients and six physiotherapists, were informed about the purpose of the study, and that they could decline to participate at any time without giving any reason. The six participating physiotherapists were approached through oral and written invitations. The physiotherapists invited the patients to participate by first informing them verbally about the project. Then, the patients received the information letter, and were invited to participate. Written informed consent was obtained from the patients and the physiotherapists, and included an agreement that permitted the researcher to use anonymously the tape-recorded interviews, the video-recorded treatment sessions, the personal notes and the field notes for research purposes. The agreement also included the permission to discuss chosen parts of the video-recordings with the other participating physiotherapists. All the physiotherapists were given the possibility to look at and comment the video-recordings where they themselves participated.

The agreement permitted the two patients recruited by the first selected physiotherapist (study I) to listen to and watch their own participation in the audio- and video-recordings.

5. Results

In this chapter, synopses of the findings from the three papers are presented.

Paper I

Øien, A.M., Iversen, S., & Stensland, P. (2007).

Narratives of embodied experiences – Therapy processes in Norwegian psychomotor physiotherapy. *Advances in Physiotherapy, 9*(1), 31–9.

The aim of this paper was to explore patient's self-narratives of embodied experiences prior to and through long-term Norwegian PsychoMotor Physiotherapy (NPMP) treatment. The study was based on qualitative research methods of two treatment courses, i.e. two patients with chronic back pain and one physiotherapist.

We found that the patients displayed similarities of symptoms, physical scores of the NPMP examination, and narrative accounts of illness. An important finding was the identification of joint pattern of narrative accounts across cases during treatment. Two main types of narrative accounts were identified; i) being detached from the body, and ii) being in touch with the body. Within each of the narrative accounts, we identified three sub-narratives or sub-themes; i) the experience of back pain, ii) the rhythm of breathing, and iii) the sensation of legs. During treatment, the narrative 'being detached from the body' appeared as gradually fading and the complementary narrative 'being in touch with the body' appeared as gradually increasing in importance. Connections between sub-themes gradually emerged. For the purpose of narrative presentation, detailed findings were presented from one case only, which displayed typical features from both cases. The presentation of the treatment of Gina illustrated the change of the patterns of the narrative accounts based on bodily experiences in a time perspective.

The statement *Physiotherapy for the whole person* was identified as aim and hope for treatment, on the basis of the main narrative account from the first interview 'being

divided in body and mind'. This narrative was based on stories of growing up in negative emotional atmospheres that encompassed struggles in order to withhold and neglect emotional expressions. During treatment, in the first video-recorded session a story of feeling detached from the body dominated, illustrated by the narrative account 'my back as a tortoiseshell'. In the second and the third video-recorded sessions, a variety of narrative accounts appeared, that included experiences of being in touch with different parts and functions of the body, i.e. breathing more deeply, as well as the self-reproaching way of thinking and acting, i.e. 'I am not always to be blamed'. In the final session, her narrative accounts encompassed new ways of acting, and the first experience of experiencing the body, as a unity. However, Gina was more in touch with the upper part of the body, than the legs. Her narrative account 'my legs – my stepchildren' illustrates this perceived difference. In the final interview Gina reflected on her improvement during the treatment. The small stories 'my body was asleep', and 'my body is awakening' comprise the transition and the change from being detached from and to be in touch with the body.

We concluded that the study indicated that NPMP treatment for patients with chronic pain may productively be supplemented with a narrative approach, and consequently an increased attention to the dialogue between the patient and the physiotherapist.

Paper II

Øien, A.M., Råheim, M., Iversen, S., & Steihaug, S. (2009).

Self-perception as embodied knowledge – Changing processes for patients with chronic pain. *Advances in Physiotherapy, 11*(3), 121–129.

The aim of this paper was to explore change and perception of change for patients with chronic back and/or neck pain during Norwegian PsychoMotor Physiotherapy (NPMP) treatment courses. Based on qualitative research methods of nine treatment courses, i.e. nine patients and five physiotherapists, we identified five patterns of change: (i) to move restricted and non-restricted; (ii) to breathe restricted and non-

restricted; (iii) to reflect in a non-exploring and exploring way; (iv) to not transfer and to transfer experiences from treatment to daily life contexts; (v) to be detached from and to be in touch with the body. The latter pattern appeared interwoven in each of the former patterns. Based on the patients' ideas of the source of and the handling of pain symptoms, the physiotherapists' descriptions of the NPMP examinations at early treatment, and change during treatment, we identified two patient groups of change; the considerable change group of five patients, and the limited change group of four patients.

During treatment, we found that the considerable change group with regard to the pattern 'moving restricted and non-restricted' gradually reduced tension as well as increased perception and variation of movements within and across painful body parts in different positions. In the limited change group, change was identified as slowly becoming in touch with slightly more varied local movements, mainly in sitting positions.

Regarding the pattern 'breathing restricted and non-restricted' the patients of the considerable change group experienced gradually to breathe more deeply, and that muscle tension and emotional strain influenced their breathing negatively. In the other group the patients experienced to change their breathing pattern in a less extensive way.

The pattern 'reflecting in non-exploring and exploring ways' included themes of creating connections to the lived body. The considerable change group gradually experienced that their way of moving influenced their way of breathing and vice versa in contexts within and outside treatment. Over time many perceived their bodily reactions as more emotionally loaded. The limited change group experienced shifts between relating and not relating to the body, including tension as well as emotions. Some gradually perceived their general habit of directing attention to things and persons outside themselves and outside the treatment context in order to forget pain, tension, sadness and anxiety. However, being able to direct attention towards

themselves in the treatment context, they gradually perceived the connection between pain and tension. Occasionally, they all perceived glimpses of embodied emotions, but their attitude towards these experiences varied from rejection to wonder.

With regard to the last pattern 'transferring experiences from treatment to daily life contexts' the patients of the considerable change group described to reduce pain by transferring treatment experiences to daily life contexts. Based on their own needs they searched for suitable levels of activity and for more varied ways to express themselves. All the patients of the limited change group, except one, described to be in need of alternating activity and rest, but hesitated to give themselves enough time. The last one explored how to walk slowly in order to avoid increasing her back pain.

We concluded that long-term treatments for patients with chronic pain are complex. Being aware patients' self-perception at different levels and in different contexts at early start and during treatment may enhance the physiotherapists' understanding of elements that may obstruct or facilitate change. Perceiving these constraints may help the physiotherapists accept the difficulties and reflect on approaches to deal with the challenges.

Paper III

Øien, A.M., Steihaug, S., Iversen, S., & Råheim, M. (2010).

Communication as negotiation processes in long-term physiotherapy: A qualitative study. *Scandinavian Journal of Caring Sciences*. Accepted for publication.

The aim of this study was to describe communicative patterns about change in demanding physiotherapy treatment situations.

Based on a research material of eleven cases, i.e. eleven Norwegian PsychoMotor Physiotherapy treatment courses consisting of six physiotherapists and eleven patients, one main communicative pattern was identified: seeking common ground – a demanding negotiating process. This pattern was interrupted by short episodes of

two types of challenges; the pattern of ambivalence and uncertainty, and the pattern of impatience and disagreement. Each communicative pattern was presented on the basis of the experiences of the physiotherapists in interviews, the experiences of the patients in interviews and personal notes, as well as video-recordings and researcher's observations of the clinical encounters, and encompassed communication over time and at the moment.

The communicative pattern, seeking common ground – a demanding negotiating process, included how the physiotherapists sensed and readjusted their approach in line with the needs of the patients, on the basis of verbal and non-verbal messages. The patients moved from withdrawing, staying mute and being dependent on the understanding of the physiotherapists to gradually contributing more actively.

The communicative pattern 'ambivalence and uncertainty' encompassed the physiotherapists' dilemma concerning choice of treatment strategy, and the patients' frustrations of not knowing how to perceive and understand bodily reactions of tension and emotional reactions, such as crying, or when exploring and expressing their own feelings and opinions.

The communicative pattern 'impatience and disagreement' comprised the physiotherapists' experience of patience as a necessary but demanding enactment in order to facilitate change, and the experience of disagreement when treatment did not seem to be progressing. Additionally, patients conveyed to be impatient in order to experience progress, and described that disagreement was connected to not-perceiving their own non-verbal activity, such as the habits of gritting their teeth, not expressing pain, or expressing pain with as smile, and of exercising mechanically. During treatment, the different communicative patterns included demanding and complex processes of negotiations of tasks, emotions connected to tasks, and the nature of the relationship.

We concluded that the physiotherapists' sensitivity of – and ability to negotiate – tasks, emotions connected to tasks, and the nature of the relationships, seemed to facilitate change. The patients' and the physiotherapists' capacity to bear and come through demanding situations created new ways of interaction. Accordingly, demanding situations may generate a potential for improving treatment outcomes. Understanding such episodes as open and dynamic, in contrast to defining the patient as demanding, was suggested as a useful perspective for treatment.

6. Discussion

6.1 Methodological considerations

Science is the methodological production of new, systematic knowledge (Kvale, 1996; Kvale, 2007). Based on the understanding of qualitative research methods as systematic and reflective processes, the intention is to develop knowledge that can be contested and shared, as well as transferred beyond the study setting. Hence, in interaction with specific people in specific setting, the purpose is to explore meanings of social phenomena on the basis of systematic collection, organization, analysis and interpretation of textual material derived from talk and/or observation (Malterud, 2001a; Polkinghorne, 2006). The researcher serves as the instrument of data gathering and analysis. Accordingly, the strength of the qualitative study depends on the researcher's carefulness and judgments, and not a narrow adherence to methods (Polkinghorne, 2006). Malterud (2001b) proposes reflexivity, validity and relevance to be overall standards for qualitative inquiry. In my opinion, conceptualising the researcher as the research instrument, points to reflexivity as a decisive standard for the assessment of qualitative research studies.

6.2 Reflexivity

Subjectivity is an inevitable part of the research process, and reflexivity is a way to cope with influence of subjectivity and to improve qualitative research (Maso, 2003). The etymological root of the term 'reflexive' means 'to bend back upon oneself' (Finlay & Gough, 2003, p. ix). In research contexts, reflexivity is defined as thoughtful, self-aware analysis of inter-subjective dynamics between the researcher and the researched (Finlay & Gough, 2003). Malterud (2001b) defines reflexivity as an attitude of attending systematically to the context of knowledge construction, especially to the effect of the researcher, at every step of the research process. Patton (2002) states that the term reflexivity points to, and calls for the researcher's critical

self-reflection and self-knowledge, and to the consideration that who one is affects what one is able to observe, hear and understand of the research field. Hence, the researcher affects the research process on the basis of background and position, selection of aims and methods of the investigation, consideration of the most appropriate findings, as well as outline and communication of conclusions (Malterud, 2001; Patton, 2002; Finlay & Gough, 2003).

6.2.1 Reflexivity – preconceptions

The first step of reflexivity comprises the identification and the sharing of the preconceptions brought into the project by the researcher. Shared preconceptions are defined as not-bias (Malterud, 2001b). Preconception encompasses previous personal and professional experiences, beliefs about the phenomena that are to be investigated, motivation and qualification for the exploration of the field, as well as theoretical perspectives (Malterud, 2001b). I presented my previous professional experiences and education in the introduction. Together with three other researchers, two physiotherapists – one with an interest in paediatric physiotherapy and one in education – and one medical doctor, who all knew the NPMP field through earlier research, I approached the material, aiming to explore how patients with chronic back and/or neck pain perceive and develop different types of changes and how the therapeutic relationships influence change. Kvale (1996) emphasised, that knowledge of the field studied is a presupposition for reaching valid interpretations. My preconceived ideas about change, i.e. that change of movement and breath would happen, were supported. However, I was surprised how the perception of the body appeared as an influential predicative element with regard to the extent of change, and that the assessment of the NPMP examination did not predicate the extent of change in a straightforward way (Paper II). Further, I did not expect to find that the patient's perception of her/his body influenced the identification and the development of the variation of the patient's self-narratives (Paper I). My idea about communication as a basis for improvement in these kinds of long-term treatments was supported, as well as the physiotherapist's attention towards the patient.

However, I was surprised at the impact of the physiotherapist's sensitivity, and that this sensitivity comprised the physiotherapist's perception of her/himself and the other, the tasks and the emotions connected to the tasks. Neither did I expect to find that the physiotherapist and the patient continually implicitly and explicitly negotiated the changing process, nor how the negotiation mainly was based on the physiotherapist's awareness of the constraints of the emergence of change (Paper III).

6.2.2 Reflexivity – epistemological perspectives

During the whole research process, my intention to enhance knowledge about physiotherapeutic practices and the formulation of the research questions challenged my search for epistemological frameworks of suitable coherence. However, combining qualitative methods is not only possible, but recommended, and the lack of epistemological coherence is a theme of discussion (Coyle, 2007). Hammersley (2008) states that theoretical models may fail to take account of the range of variation in orientation to be found even within a single society. Patton (2002) focuses on the pragmatic side of qualitative methods and emphasises to ask open-ended questions and observe matters of interest in real world settings. In line with this, my departure was pragmatic, and I claimed no allegiance to any single epistemological perspective. Polkinghorne (2006) points to Norris' epistemology based on virtues, i.e. honesty, integrity, caution, openness to criticism, and willingness to give up cherished beliefs in the face of conflicting evidence. During the research process, these virtues appeared as useful prerequisites with respect to the researcher's responsible judgements. Additionally and gradually, from my point of view, the research questions, the generation and the analysis of data pointed to the equivocal epistemological framework, in the intersection of phenomenology and social constructivism. Merleau-Ponty's (2004) perspective, the phenomenology of perception, points to the body as an equivocal phenomenon. In the studies, this seemed to deepen the understanding of how patients gradually experienced to vary and connect ways of moving and breathing to more or less emotionally loaded situations, i.e. they constructed variations of meanings and self-narratives. I tried to

understand and capture this ambiguity in line with Merleau-Ponty's (2004) understanding of the reciprocity and the shift between what is defined as background and as figure. However, on the basis of the factual experience of the body in the world, this perspective may be drawn too far. In discourse research, the process of the construction of social realities and identity are of more interest, than what factually happened (Wetherell, Taylor, & Yates, 2001). Hence, I decided on shifts between epistemological perspectives, Merleau-Ponty's phenomenology, and a moderate version of social constructivism.

6.2.3 Reflexivity – design and methods

The selection of the longitudinal multiple case design, and the application of a variety of qualitative methods for generating and analysing data, enabled us to investigate and understand the unfolding process of change and interaction at different times, as well as to explore prospectively and retrospectively the participants' ideas, opinions and experiences of these processes. Applying the longitudinal multiple case design, we were faced with challenges, as for instance how to impede drop-outs, how to organize and overcome time-consuming data collection and vast amount of complex data analysis, and how to complete the studies in due time. Being the instrument for producing and analysing data from different contexts, I needed to develop proficiencies at different levels. The management of the many data sources became feasible, due to my earlier experiences with a similar design, but with few cases (Øien, 1999). Developing a study with an extensive amount of data is a challenge. We still found that the studies of treatment needed varied data sources.

6.2.4 Reflexivity – data

The relationship between interviewer and interviewee of individual interviews

Doing good qualitative research interviews with both colleagues and patients was an intention and a challenge. Good interviews require expertise, i.e. craft learned through practising interviewing (Kvale, 2007). As a researcher, I had some

experiences with doing interviews, while as a clinician I had extensive experience with doing interviews of patients about their health and diseases. The research interview does not keep the close personal interaction of the therapeutic interview (Kvale, 2007). Practising reflexivity before and throughout the interviews concerning the differences of these types of professional interviews, helped me tune into and sustain the practice as researcher.

The research interview takes place between unequal partners of power, as the researcher sets the stage for the interview by, for instance, introducing the topic, following critically the interviewee's answer and using the outcome for his or her purposes (Kvale, 2007). In these studies, neither the relationship of the researcher and the patient, nor the relationship of the researcher and the physiotherapist appeared as egalitarian dialogues among equal partners. I had the power to introduce and explore topics, but I felt responsible for the interviewee's well being, a demanding situation. The participants may have felt the pressure to produce accounts of progress and development rather than difficulties. However, this problem seemed to be partly outweighed as the participants shared their struggle during the treatment situations, particularly described in Paper II and III.

Researcher-patient relationship

Data were collected on the basis of two interviews with each patient at intervals. The first interview, besides being a source for producing data, dealt with the tension between two persons, unknown to each other, but supposed to spend future time together in a therapeutic context. Concurrently, being aware my power to pose questions, I was aware that the way I acted constituted the basis for our future interaction, which included the patient's right to withdraw at any time. Hence, I prepared for and carried out the interview as a process where I explicitly negotiated information and implicitly my position in the ongoing research. Concomitantly, I participated in two dialogues, one with the patient and one with myself. The latter included themes such, 'how does she/he experience my questions', 'how does she/he experience the distance or nearness between us'. Underlying all research interviews is

the tension between an extra local need to collect data on a topic, and the here and now situation of interaction in which these data are collected (Rapley, 2001).

In these studies, all the interview relationships, except one, consisted of two women. The interaction of all the relationships, between the female researcher and the female patients, as well as between the female researcher and the male patient, differed. The latter did not appear as outstanding. Hence, the issue of gender was not emphasised.

Researcher–physiotherapist relationship

Data constructed on the basis of individual interviews with the physiotherapists, mainly comprised the physiotherapist's assessment of the patient's NPMP examination, as well as opinions and experiences of the patient's changing processes. The topic of power, touched in the discussion above, appeared to be the same in the relationship between the researcher and the physiotherapist. Moreover, in these relationships I had to be sensitive to a suitable distance, but the tension between the need to produce data and the need to sustain a good atmosphere never appeared as critical. The timing of the two types of interview was different. The interviews with the physiotherapists took place near the end of the research process, subsequent to the treatment sessions. Hence, we were not going to build a new relationship. The physiotherapists experienced the interview to be a positive challenge with regard to learning, i.e. searching for suitable words to describe how they were practising, with the exception of one. In these studies, the physiotherapists' experiences partly contrasted the experiences of the professional peers in the interviews undertaken by Coar and Sim (2006). Their informants viewed the interview as a test of their professional knowledge, and as a context for education, i.e. the interviewer was the authoritative source of clinical information. These findings were more in line with how some physiotherapists in our studies, experienced the video-recorded treatment sessions. However, the physiotherapists' decision to participate, in spite of uneasiness, may point to an understanding that what they say matters, in line with the suggestions of Miller and Glassner (1997). The focus group interview highlighted, for instance, meta-perspectives the physiotherapists themselves felt enriching.

Data – relationships of the video-recorded treatment session

Patton (2002) states that the observer must deal with issues of how his/her background and predispositions may have constrained what was observed and understood, as well as how the observational process may have influenced what was observed. Planning my entrance to the NPMP treatment field appeared as a challenge, due to the fact that I was researcher and colleague, but with a different location of work. Patton (2002) points to the entrance to a research setting as important. Considering my participation from the physiotherapists' point of view, the disclosure of one's practice may feel both threatening and inspiring. In order to build knowledge and trust, and to prevent a feeling of exploitation, I prepared to discuss professional themes with them, either before or after treatment session, within or outside the treatment space. Implicitly, I negotiated my presence with the physiotherapists, whom I defined as the studies' gatekeepers. With regard to the patients' agreement of participation, I had no influence. I had to trust the physiotherapists, their selection and assessment of patients, as well as their presentation of information.

During the research process, the researcher's observation of oneself, others, and the interactions of oneself with others are important (Patton, 2002). Entering the treatment field, the physiotherapists did experience my presence as a positive challenge and as a strain, and I did sense their emotional mood as well as my own mood. I kept a distance to the physiotherapist and the patient, by not taking part in verbal dialogues, if not being approached. However, I influenced the participants as they influenced me. There is no such thing as non-behaviour, i.e. one cannot, not communicate (Watzlawick et al., 1967). Observation is a context of interaction (Angrosino, 2005). Hence, before or after the patient's arrival or departure, on the basis of the need of the physiotherapists, I discussed professional topics as well as any tension between us. Thus, we renegotiated our collaboration.

I knew the field and its language as an insider, and I was able to identify and reflect on matters that might escape the attention of a researcher without such a background, as for instance, the very small emergent variation that constituted the first changes of

movement. Applying principles from hermeneutics, the interpretation of meaning is emphasised as the reciprocal influence between presupposition and understanding, as well as between parts and the whole (Kvale, 2007). I made my preconceptions explicit earlier. However, being able to grasp the influence between the parts and the whole may in this context be based on my insider view. Cultural blindness – seeing and confirming what we usually see, and concurrently failing to catch messages of new emerging knowledge – occurs (Malterud, 2003).

Standing at a distance away from the participants, helped me to observe and understand variations of movements and expressed experiences. Patton (2002) states the importance of standing far enough away from a particular culture in order to see its separate events. On the basis of the family therapy education, earlier experience as researcher, and by repeatedly asking myself the wondering question; 'What is happening?' and 'How do the physiotherapist and the patient contribute to the process of change and interaction?', I made an effort to counterbalance my view as an insider, i.e. an experienced NPMP specialist. I wondered, for example, why the physiotherapist did not elaborate more on emerging emotionally loaded bodily experiences. Discussing with the physiotherapist, prior to or immediately after treatment, I learned that the therapeutic decision, first and foremost, was dependent on her/his prior experiences with the patient, as well as the possible outcome of the present situation, independent of my presence. However, they sometimes did postpone a further deepening of themes due to my presence. At other times they found the present situation unique and urgent, and elaborated on sensitive themes, despite of my presence. I never experienced to be in an ethical dilemma with regard to the well-being of the patients, although I occasionally witnessed their uneasiness, if the physiotherapist, for instance, confronted them with the pattern of withdrawing from the situation.

Data – the relationship between personal patient notes and the patient

From the perspective of the patients, self-reflexivity connected to interactions and change was encouraged through writing personal notes – a process over time. Some

patients commented on the writing process as a tool and a way to discover their patterns of moving and acting (See Paper I). Gough (2003) emphasises approaches that promote reflexivity in participants, in parallel to that being practised by the researcher. Hammersley (2008) points to the ability of human beings to see and to redirect their line of engaged action, on the basis of their reflexivity.

Data – field notes

The field notes written subsequently to the interviews and the video-recordings included my impressions of the situation, ideas about future analysis, use of theoretical models, and themes for further discussion. Writing the field notes emerged as regular solitary reflections. In line with Gough (2003), writing field notes, i.e. making a reflexive account, became a way of doing reflexivity. Reflexivity based on the field notes, was enhanced through discussion with supervisors, colleagues, and the participants. For example, the situation where the patient pushed the physiotherapist as described in Paper III influenced me as a researcher, therapist and colleague, and turned out as a basis of reflexivity. Reflexivity is a way to engage with participants of the study (McKay, Ryan, & Sumsion, 2003). However, from my point of view, reflexivity also appeared as a necessary remedy in order to maintain enthusiasm for the research process.

Data – the relationships of the focus group interview

Data produced from the focus interview, included the physiotherapists' final reflection, a meta-perspective on the experiences and opinions of the progress of the treatment for each of their patient, and their contribution to this change. They applied self-reflection, i.e. reflection about earlier events, and reflexivity as a more immediate, dynamic and continuing self-awareness (Finlay & Gough, 2003, p. ix). I planned and conducted the group in a rather structured way, based on my intention to open possibilities for all the participants to develop variations of their stories and meanings, and based on my knowledge of the group participants, i.e. different length of therapeutic experience, different age and gender, and different ways of expressing themselves. However, after presenting the structure of the group, and initiating the

discussion, the physiotherapists themselves developed the dialogues. I only interfered and requested further exploration of a theme when something emerged as unclear. This way of conducting the group enabled me to observe and listen in a rather detached way, i.e. applying the strategy of a meta-position (Malterud, 2001b). Kamberelis and Dimitriadis (2005) state that there is no easy separation between the researcher and the researched, and focus groups may function to decentre the role of the researcher and promote joint constructions of multiple voices. In my opinion, the separation between the researcher and the physiotherapists was rather clear. Within the research process, a key issue concerns the distribution of power and status (Finlay & Gough, 2003). All the same, the participants co-created a multiplicity of ambiguous meanings of their contribution to change. Whether the creation would have been of greater influence with a more flexible structure we do not know. In accordance with Kamberelis and Dimitriadis (2005), the dialogues did help the researchers to work against premature understandings and explanations. All the participants used their allocated time to share own experiences and comment on the others'. The participants did act differently, most strikingly concerning their personal way of expressing themselves, as for example, 'I wonder…' in contrast to 'my experience points to that…'.

6.2.5 Reflexivity – analysis

Transcription

The selected transcription style was based on the intended use of the transcripts, the research purpose (Mishler, 1986; Kvale, 2007), and the understanding of meaning as co-constructed (Watzlawick et al., 1967). Hence, I followed the recommendations to transcribe some details of the interaction (Rapley, 2001). However, when transcribing the interviews, my main focus was on the emerging themes, not on how the participants contributed to the development of the themes. Mishler (1986) recommends us to pay close attention to linguistic and paralinguistic features that appear in occurring talk, for instance pauses. However, non-linguistic features of speech situations, such as gestures, facial expressions, and body movements are not

captured on audiotape recordings. I transcribed the talk of both the interviewer and the interviewee. First and foremost, I emphasised the verbal messages, i.e. the questions and the answers of the researcher and the participant, and to a certain degree non-verbal messages as tone of voice, silence, and pauses, in order to capture the atmosphere of the context. Systematic transcription procedures are necessary for valid analysis of interview data, but the level of details is a matter of judgement that depends on the aims of the particular study (Mishler, 1986). It is impossible to grasp all that happens through a transcript. Hence, I made the above choices.

The video-recordings of the treatment sessions, the main focus of the studies, opened up for more comprehensive transcriptions of movements as well as verbal- and non-verbal messages. Selected parts of the video-recordings were transcribed in detail in order to explore how the physiotherapist and the patient influenced each other, and contributed to the patient's changing process. Gestures, facial expressions, and movement are difficult to describe from observations and video-tapes (Mishler, 1986). Additionally, I found it very time-consuming to carefully accomplish transcriptions of expressions and movements of the selected parts. I made simplifications in order to grasp the non-verbal activity that I evaluated as significant.

Analysis – a practical approach

The selected methods of analysis were combined and applied beyond their original contexts. Analysing, my intention to follow the described steps of the original methods faded, and I became more concerned with their applicability and practical use in the specific studies. Conducting the analysis of the interviews and video-recordings, I applied, for instance, only the first steps of the systematic text condensation of Malterud (1993; 2003). I applied Kvale's (2007) interpretation at different levels in the analysis of interview texts and video-recordings. Both are first and foremost described in the context of analysis of interview texts. However, the necessary and practical approach involved and challenged a flexible analytic attitude. Coyle (2007) advocates methodological flexibility and guards against a slavish attachment and devotion to method. Polkinghorne (2006) emphasises that the conduct

of qualitative studies is problem-centred, rather than method-centred. Knowledge about techniques and procedures of qualitative methods is helpful, but the practice requires development of the requisite skills beyond the application of techniques (Polkinghorne, 2006).

The analyses were based on many cases, and ranged from a macro to a micro level. A critique may be raised that the number of cases and the amount of data are too large. Hence, there might be little time to do a penetrating analysis (Kvale, 2007). I built the analysis case by case. First, I analysed each case over time, second, across cases, and third, selected extracts at the micro-level. The issue of interpreting data at specific stages, as well as analysing them in the light of data that emerged at a later stage appeared as a challenge. Consequently, it was necessary to search repetitively for themes or patterns of change and interaction. While performing the analysis, I simultaneously worked in my own clinic. This enhanced the analytic reflexivity, as I tried to understand the phenomena under investigation across contexts.

6.3 Establishing meta-positions

Meta-positions are strategies for creating adequate distance from a study setting that you are personally involved in (Malterud, 2001b). I understand these strategies as a tool for reflexivity. Above, I discussed my influence and search for a balance between closeness and distance during the different steps of the research process. Additionally, I included the perspectives of the participants (see 4.5.6). The perspectives of the other researchers or supervisors also served as meta-positions. They were not directly involved in the data producing process, except MR, the co-moderator of the focus group interview. However, in repeated discussions about data production, and analysis, they represented external views, a balance to my involvement at all steps of the research process. Multiple researchers might strengthen the design of a study by supplementing and contesting the statements of each other (Malterud, 2001b).

6.4 Validity

Internal validity is connected to the question whether the study investigates what it is meant to investigate, while external validity concerns in what contexts the findings can be applied (Kvale, 2007). Sampling is important and connected to validity (Malterud, 2001b). I here apply the term internal validity as synonymous to the term trustworthiness in Paper I, II, III, and external validity as synonymous to generalization in Paper I, II, and transferability in Paper III.

6.4.1 Internal validity

Studying treatment courses is a long-term process, and in these studies it is limited by the project period. Hence, the sample size, twelve cases, was based on a reasonable choice, large enough to imply variation, and small enough to analyse in depth the large amount of data included in each case. The sample was not based on a stepwise inclusion dependent on what extra material was needed to answer the research questions. I was concerned about avoiding doing a shallow analysis with too many participants. In case of a few drop-outs, we still considered the sample size to be large enough to answer the research questions. One male patient left the project, due to change of residence, after the introductory interview and the first video-recorded session. These data are not included, due to the process perspective of the studies. The physiotherapist, who recruited the patient, tried within a short period to recruit another one, but failed. The fact that the person who left, was a man, touches issues of gender. It could have been of interest to know to which group he had been selected, in paper II. However, we do not know if and how the influence of the two men would have added a difference to the findings in a more varied direction.

On the basis of patients available on waiting lists or in early treatments, the physiotherapists' selected patients of different age, sex, education, occupation and family situation. The selection ensured participants actively seeking NPMP or being referred by their physicians. This indicated a selection of patients who were in favour

of treatment, and hence, motivated for change. This may have influenced the findings. On the other hand, patients who were not motivated for treatment would probably not have been on the waiting list. Findings encompassed change of different degrees and levels (See Paper II).

In these studies we applied triangulation of researchers, theories and methods for producing and analysing data, in order to capture and deepen our understanding of the investigated phenomena. The aim of triangulation is to increase the understanding of complex phenomena (Malterud, 2001b). The contribution of the supervisors/ researchers was touched above in the paragraph of meta-positions. The combination of different sources of data, i.e. individual and focus group interviews, video-recordings, patient's personal notes and researcher's field notes, created different types of data that increased the internal validity, as the strength of one approach compensated for the weakness of another. Data based on the participants' talk in interviews, and their movements in treatment sessions supplied and challenged each other. We analysed data from different sources, which held the possibility of facilitating a shift of focus and awareness of category selections, as suggested by Peshkin (2001).

6.4.2 External validity

The aim of research is to produce information that can be shared (Malterud, 2001b). Hence, the transferability of knowledge from one situation to another is emphasised (Malterud, 2001b; Kvale, 2007). However, the nature and the extent of the data ascertain what conclusions can be drawn (Malterud, 2001b). Presentation of contextual background material, i.e. demographics and study setting, enables the reader to assess in which situations the findings might provide valid information (Malteud, 2001b). The richness and variation of the data, thoroughness and credibility of the analysis, as well as levels of analysis and interpretations included, are also essential parts in such judgements (Andenæs, 2000). The value of the produced knowledge should be evaluated due to clinical use or relevance (Malterud, 2001b;

Lyons & Coyle, 2007; Kvale, 2007). These studies may have clinical implications in other clinical settings comparable in different ways to the one in our studies.

In Paper I, the themes of the narratives were limited to the two cases in this study. However, the finding – that narrative accounts concerning experiences of growing up in negative emotional atmospheres seem to influence how patients experience and describe their body – may be transferable to comparable contexts of physiotherapy, i.e. contexts where patients search physiotherapy for pain associated to emotional strain over time. During treatment, the finding that narratives about the body seems to change in line with changed experiences of the body, may enable physiotherapists working with patients with chronic muscle pain to be sensitive to and take advantage of the ongoing verbal and non-verbal dialogues as well as the change of movement and breath.

In Paper II, we found that long-term NPMP treatments for patients with chronic muscle pain are complex and demanding, and included differences in extent of change, as well as change at different levels. The core finding was that the extent of change at the different levels emerged closely connected to the patient's perception of the body – self-perception – at early treatment, as well as during treatment. This finding may be transferable to treatments of patients with chronic muscular pain in other physiotherapy treatment contexts.

The findings of demanding communication patters, i.e. seeking common ground, ambivalence and uncertainty, and impatience and disagreements (Paper III), may be transferable to long-term physiotherapy in general. By understanding such patterns as common variations of communication in such treatments, the physiotherapists may be able to deal with these constraints in an accepting and productive way.

However, transferability of knowledge about change and communication from these long-term treatments must be judged according to if – and in what ways – the

participants in comparable clinical settings themselves judge it to be relevant and useful (Andenæs, 2000).

6.5 Reflexivity – Planning the study anew

Having completed the studies and the thesis, I want to make a last retrospective glance at the first phase of the research process. Planning the studies, I was uncertain about both exploring opinions and experiences of therapeutic change and communication from the perspectives of patients and physiotherapists, and being able to complete the studies in due time. Holding on to my wish to complete in due time, I might have benefited from reducing the data sources. By omitting the interviews with the physiotherapists, the individual as well as the focus group, I might still have grasped the unfolding of the therapeutic change and interaction, and the patients' opinions about the treatment. The field notes written subsequently to each treatment session partly captured the perspective of the physiotherapist, and might have been applied more thoroughly. However, the richness of data sources utilized in the study of communication (Paper III), including interviews with the physiotherapists, ensured a nuanced and in-depth description of the patient-therapist interaction.

6.6 Discussion of results

The contribution to knowledge about NPMP treatment over time for patients with chronic pain emphasised in study I, II, and III is the centre of the attention. The intention is to grasp and discuss themes across the studies and to capture levels of meta-reflection and details.

6.6.1 Professional knowledge as practical synthesis

Emphasising the results of study I, II, and III, a discussion of the theoretical perspectives applied is appropriate. In line with the treatment context, the theoretical perspective of NPMP – influenced by knowledge of biology and psychology – was

the connecting thread in all the studies. A narrative approach built on the systemic perspective of communication was used in study I. Moreover, Merleau-Ponty's perspective of phenomenological perception was employed in the discussions in study II, and the systemic perspective of communication in study III. A knowledge basis that consists of elements from different theoretical or scientific fields is heterogenic (Grimen, 2008). This research material originated from clinical practice in NPMP physiotherapy. My intention was to enhance the professional physiotherapy knowledge with regard to treatment of chronic pain patients by discussing the results in the light of elements of knowledge from different fields, as for example biology, communication or phenomenology of the lived body. Grimen argues that mainly, the basis of professional knowledge is heterogenic and fragmented. Different elements of knowledge are integrated as practical synthesis, in contrast to theoretical integrated ones. Client-oriented professions, as for instance physiotherapy, need to apply knowledge from different fields (Grimen, 2008). Grimen argues that professional knowledge, as for instance knowledge of the health professions, draws on different scientific disciplines, as for instance biology and psychology. In the studies above, I drew on knowledge from different disciplines, both within and beyond the NPMP field. The purposes of the health professions, directed towards something outside themselves, contribute to how knowledge are put together (Grimen, 2008). Physiotherapy is not developed as a profession for the sake of itself or the physiotherapists, but as a service to the community based on certain values, for instance to prevent and cure diseases. In addition to biomedical knowledge about functional problems and specific diseases, physiotherapists need to develop skills in order to communicate with the patients, understand their life contexts and sort out different types of elements that may influence their functional problems, disease and recovery. Hence, the basis of knowledge needs to be divergent (Grimen, 2008). In our studies, the intentions of the physiotherapists were, for instance, to reduce pain, as well as to improve health over time by facilitating variations of movements and meanings of symptoms and bodily reactions, individually tailored. Productive perspectives of professional knowledge comprise meaningful connections rather than

complete theoretical integration (Grimen, 2008). In our studies, the theoretical perspectives were supposed to embrace meaningful connections, as for instance the patient's experience of how muscle tension was connected to restricted breath and movements, strain in daily life, and relationships of conflict (Paper II). Different elements of knowledge were put together and understood as meaningful unities, as suggested by Grimen (2008). In these studies, elements of knowledge from biology and psychology, communication and phenomenology of the lived body, were put together due to challenges of the practical health work in the clinic.

6.6.2 Knowledge in the specific practice

On the basis of the long-term NPMP treatment, all the patients described experiences of changes. The clinical NPMP approach was the same, but individually tailored. In all the therapeutic relationships, the patients worked on tensions in different ways and different positions when moving and being moved. But the extension of – and the type of change – varied between the two main groups, the limited and the considerable change group, and between the patients within each group (Paper II). We linked this diversity of change to the fact that the therapeutic relationships consisted of different physiotherapists and different patients with their specific needs. Thus, each therapeutic relationship was unique. Change emerged on the basis of a variety of communicative patterns (Paper III). Through communication participants influence each other reciprocally (Watzlawick et al., 1967). First and foremost, change emerged dependant on the physiotherapist's sensitivity of the patient's possibilities to act in different ways in the given situation, as well as the physiotherapist's aptitude to act in accordance with these possibilities (Paper III). Hence, knowledge in practise is inseparable from the carrier of knowledge as well as the context of the application. Knowledge that points to carrier and context is called the indexicality of practical knowledge (Grimen, 2008, p. 76). In line with this, Molander (1989; 1997) carried out an epistemological analysis of 'knowledge-in-action', and searched to develop a theory for knowledge in practice, i.e. how to know one's way about particular cases. Knowledge-in-action is defined by what someone

can do and accomplish based on the dialogues in actual practices (Molander, 1989; 1997). In our studies, the aim of the treatment, reducing and coping with pain, and the treatment as ongoing specific obstacles towards this aim governed the physiotherapists' contributions (Paper I and III). Directive knowledge, i.e. superior knowledge of what is worth doing, directs knowledge-in-action (Molander, 1997). The knowledge concept is complex and includes, for instance, skill, insight and enlightenment. From the professional part, knowledge-in-action implies skilful and wise action, here on the basis of skilled and thoughtful therapeutic NPMP practice. The professional needs to be attentive and present, i.e. practising will and engagement in order to improve learning for the other in the best possible way (Molander, 1989; 1997). In these studies improvements appeared, as for instance increased variety of movements and narratives. Mainly, the physiotherapists acted attentively with respect to the specific reactions of the patients in the ongoing dialogues (Paper I, II, III). In order to know oneself as a contributor and enable oneself to perform better, practising reflexivity is assessed as important (Molander, 1997). The physiotherapists practised reflexivity. Within short delays, they discovered to be on wrong tracks. Part process, case 4, study III, illustrates how the physiotherapist practiced reflexivity based on the experience of expecting performances from the patient that were beyond her capability at the moment. The physiotherapist shared her experience with the patient. Trying to do the best, implies to disclose oneself for both own experiences and that of the other (Molander, 1997).

In our studies, all the physiotherapists were experienced practitioners. In accordance with Molander (1997) knowledge is based on experience and a critical eye. Grimen (2008) refers to Aristoteles, who made the first analysis in our culture of indexed knowledge, by applying the concept of phronesis. This concept is indexed to the person's experiences and ways of acting in particular situations. In the studies, change may have been dependant on the physiotherapist's long professional experiences and how she/he applied and adapted this experience to the specific patient in the particular situations, and in the context of the NPMP approach.

6.6.3 Recognition and painfully lived relationships

On the basis of the patient's experiences, and stories of life – conveyed in the interviews, the personal notes and the video-recorded treatment sessions – being part of painful relationships over time, left traces in the body. These included muscle tension, restricted breathing and withheld expressions of emotions and words (Paper I, II). The majority of the patients narrated accounts about past or present painful relationships. However, at the start of treatment, only the patients of study I connected past occurrences of vulnerable and demanding close relationships to their present experiences of pain and tension. These patients shared previous experiences of growing up in strained family contexts. Gina, for instance, understood the hostile interaction between her parents as a connecting thread throughout her life which contributed to the development of psychological pain, anxiety, and muscle pain. As a small child she reacted by crying. Over time, by making efforts to live normally, she learned to keep an untouched mask. She let no others see her inside sadness, chaos, and shame of being afraid. Gradually, she experienced to be detached from her body, i.e. she experienced herself as a mind that carried her body around. Schibbye (1996; 2004; 2009) applies the concept of recognition. In a balanced relationship, recognition involves that each individual is able to take the other person's point of view. Recognition implies attuning to the other person's present feeling or experience (Schibbye, 1996; 2004; 2009). Our need to be appreciated is decisive in order to build up the experience of self-confidence and self-respect, and is based on a recognising relationship, as for instance, the child-mother relationship. Self-confidence implies, for instance, that we can trust the reaction of our body, and express wishes and needs without the fear of being rejected (Schibbye, 2004). Recognition is a basic attitude that is expressed as listening, understanding, accepting, tolerating and affirming. In study I, Gina expressed that her parents did not attune to, or share, her feelings as a child. They neither listened, nor understood nor affirmed her expressions. She felt left alone. Gina learned to not recognize her emotional needs and expressions. Braatøy

(1952) emphasised that our habits are created on the basis of what was said, and especially from what was not said by those who are most closely related to us.

In contrast, in interviews and during early treatment, the patients of the considerable and the limited change group in study II, only exceptionally presented their symptoms of pain in connection to relational problems. The patients of the considerable change group mainly connected pain symptoms to work load and time pressure, while the patients of the limited change group mainly described pain symptoms within a biomechanical frame.

In the introductory interviews, the patients in study II shared their pain narratives. These narrative accounts, not presented in the papers, pointed to how the patients experienced to struggle on their own in order to cope with demands of life, by, for instance, neglecting and actively suppressing own needs. They labelled their pain stories as follows: to be the strong one and to not share her/his feelings, to pull oneself together over time by flexing jaw, tongue and legs, to have no consideration of oneself, to be the one to organize everything for others and to cut off own experiences of pain in order to survive, and to be the one that goes forward by not looking back. These patterns seemed to be partly similar to the way of acting described in study I, i.e. trying to live and look normal. Over time, these enactments seemed to influence the patients' experiences of themselves. At early treatment, like the patients in study I, also the patients in study II experienced to be partly or wholly detached from their bodies.

The pain stories of the patients of study II included few accounts of self-reflexivity concerning experiences of feelings, actions and thoughts. This may be understood as developed habits over time. They did attend NPMP treatment, a decision that can be interpreted as a wish to learn to act differently, in addition to seek help for the pain. In study I, the patients were in touch with ideas of how their growing up in close and painful relationship influenced their body. In psychotherapy self-reflexivity is seen as a goal of treatment (Schibbye, 2004; 2009). The patients of study I did attend

psychotherapy. However, psychotherapy did not seem to influence their experience of being detached from the body.

Scrutinizing the first interviews of the patients of study II anew, stories of strained relationships did appear, with the exception of one. These stories included different types of losses, as for instance loss of mother in the early teens, loss of love and attention due to, for instance, parent's divorce, and at more recent time, loss of husband or child. Other stories included heavy obligations from early age, as for instance taking care of sick siblings, mother and other relatives. During treatment, these stories came to the foreground as embedded bodily experiences. Agnes, for example, first connected her muscle pain to strain and lack of training. However, in the treatment situation, based on the expression of sadness, she awakened her memories. Immediately, the physiotherapist considered her sad expressions, asked about and listened to her story. Gradually, the patient connected her muscle pain and restricted breathing to her earlier experiences of marital conflicts and the termination of pregnancy. Thus, the physiotherapist affirmed the patient's expressions and story. Schibbye (1996) emphasises that affirmation gives authority to the patient's experience. Here, the patient did appear as the author of her story. Being able to accept and explore her painful story, she seemed to recognize another part of herself. Some of the details above are not described in Paper II.

During treatment, the pattern of the patient's experience of being or not being in touch with the body – either connected to earlier painful relationships, or the curbed way of coping with strain, or both – influenced the communication between the physiotherapist and the patient (Paper III). Keeping this in mind may help the physiotherapists to endure the challenging situations of, for instance, disagreement and uncertainty. The physiotherapist, by making efforts to adapt to what she/he assessed to be the best for the patient, and to keep in touch with oneself as well as the therapeutic relationship, implicitly tried to recognise the patient, oneself, and the relationship. In accordance with Schibbye (2004), as a starting point therapists are not recognising, but have the possibility to learn to be recognizing, by continuously

working with oneself in relationships in practice. Hence, the recognising relationship constitutes a basis built over time. In study III, ruptures of the relationship occurred. Schibbye (2004) states that rupture of short duration do not destroy the recognising basis. Conflict, anger, and misunderstanding do occur as normal variations in treatment relationships, as for instance in paediatric physiotherapy (Iversen et al., 2008). Conflicts create possibilities for reconciliation, self-reflection and differentiation of feelings and actions (Schibbye, 1996). In our studies and in accordance with other studies, recognition was an important tool with regard to development, as for instance, the affirmation of new insight of connections of stress of life and pain, for patients with chronic muscle pain (Steihaug, Ahlsen, & Malterud, 2002a; Steihaug & Malterud, 2002b).

6.6.4 Perception – the core of change and knowledge

Perception of the body appeared as a core dimension of change across study I, II, and III. This dimension was embedded in the patterns to be detached from and to be in touch with the body, which again emerged as interwoven in the different types of change, i.e. change of narratives (study I), change of movements, breath, reflection or self-reflexivity, and stories about daily life actions (study II). This core dimension was not mentioned explicitly in the study of communication (Paper III). However, it appeared, implicitly, as the guiding element of the therapeutic communication, when the physiotherapist continuously took into consideration and adjusted the approach to what she/he perceived to be experienced by the patient. The part process analysis of case 1 in study III illustrates this point. The physiotherapist intended to improve the relaxation of the patient's back muscles through massage. On the basis of the patient's twisting movement, the physiotherapist interpreted that she seemed to be in touch with her pain, and not with her tension. The physiotherapist adapted the approach in accordance with the patient's perceptions.

The essence of perception is the contrast between background and figure, as stated by Merleau-Ponty (2004). Facilitating change, the physiotherapists seemed to be guided

by this perspective about contrasts. The perceptual basis of being detached from or in touch with the body appeared as the physiotherapists' point of departure. Not sensing any tension, for example, appeared as the background for the effort of the physiotherapist and the patient to improve the patient's perception of the local tension of a body part, the figure, through movements, touches, and comments. Next, the local tension served as background for the new figure, the creation of shift between tension and relaxation. The following example from study II illustrates this point. In the last video-recorded session, the physiotherapist, intending to enhance relaxation of back muscles, instructed Harriet to move the pelvis forth and backward independently of upper thorax. Harriet contracted the lumbar-thoracic muscles as she did not sense what to do. Focusing on moving the pelvis only, she gradually experienced to move the pelvis more and the upper thorax less.

The degree of change varied among the patients. However, across cases, the changing process of the different types of change at a micro-level appeared as similar. Change emerged as small variations attained step-by-step. Concerning movement and tension, the very first steps of perceptual change started from not or only vaguely perceiving tension to perceive specific tension. Perceiving tension vaguely may be a 'first truth' of an indeterminate experience 'that something is there' (Merleau-Ponty, 1968, p. 160; Merleau-Ponty, 2004). Sensing local differences between flexing and relaxing muscles opened possibilities to perceive and reduce hitherto unknown tensions across the local body part in an ongoing changing process. The transition from an indeterminate to a more determinate state increases the knowledge of one's own body (Merleau-Ponty, 2004). A similar changing process appeared with respect to the development of the variety of self-narratives. Gradually perceiving and varying the movements of the body as a whole, influenced reciprocally the gradual creation and variation of self-narratives. The preceding and prerequisite steps to these changes also seemed to be hidden in the details. The main narratives of each of the three phases of change, presented in Paper I, consisted of sub-narratives based on the slow process of perceiving the back, the legs and the breath. Thus, the communication between the

physiotherapist and the patient, that embraced the above types of change, appeared as knowledge-producing processes by sharing and improving the patient's perception of the body (Paper I, II, III). Implicitly, based on the communication in the treatment, the patient learned how to initiate and generate knowledge about herself or himself in relationships.

The emergence of the different types of change and knowledge seemed to be first and foremost dependant on the physiotherapist's flexibility concerning attention, i.e. being able to act on what emerged at the moment, as well as connecting the act of the moment to the facilitation and exploration of coming differentiations. The physiotherapists continually claimed the patient's attention that appeared as embedded in the processes of perception. In accordance with Merleau-Ponty (2004), attention and perception influence each other reciprocally. Concomitantly, the physiotherapists challenged the patients to act differently, i.e. to break the habits embedded in the body over time. This process appeared demanding (Paper III), as the patient was supposed to change both the direction of the attention and the use of muscle strength, for example, dissolving the tension of the jaw muscles, and facilitating the balance of the legs. Bodily based consciousness is a matter of 'I can', i.e. the general power of putting oneself into a situation (Merleau-Ponty, 2004). Being able to awaken the power of 'I can' and turn this power into a different direction seemed to include the process from an indeterminate to a more determinate level of self consciousness and situational consciousness. Being in states of indeterminacy, i.e. not knowing where to go and what to do, appeared as challenging. In our studies, the possibilities of leaving this state of indeterminacy seemed to be embedded in the act of perceiving the specific parts or functions of the body. Part process 2, in study III, illustrates this process.

In general, focusing on specific details of movements of the body as a whole in a step by step process, and simultaneously aiming to continually create contrasts or variations to the preceding perception of the movements, appeared to influence the process from being detached to becoming in touch with the body.

6.6.5 Self-knowledge – reciprocal influence of moving and meaning

Over time, the patients experienced varying their patterns of moving and breathing within and outside treatment contexts. Concurrently, the patients at different phases gave new meaning to their experiences and varied their narrative accounts of and about the body (Paper I, II).

Merleau-Ponty (2004) stated that we are situated in the world as incarnated bodies, and that the world is the world-as-meaning. The world is what we perceive, and perception is defined as access to truth. Hence, the change of perception from being detached to becoming in touch with the body seemed connected to meaning-making processes. Scrutinizing the results of paper I, II and III, I tried to grasp the connection between these types of change in the making. Emphasising the variety of movement and breathing as described in study I and II, the physiotherapist and the patient seemed to participate in different types of meaning giving dialogues. The non-verbal dialogues between living bodies formed a basis for the therapeutic conversations. One type of dialogue consisted of the immediate comments on the ongoing experiences of movements. Another type of dialogue comprised reflections with regard to linking threads between the different uses of the body over time as well as across contexts. The body is a synergetic system where the functions, including affective states, are linked together in the general function of being in the world (Merleau-Ponty, 2004).

These types of dialogues appeared in study I, II and III. First, the immediate meaning-making comments are emphasised. In study I, a sequence from the first video-recorded session of Gina and the physiotherapist illustrates this point. Concomitantly, the physiotherapist massaged the patient's back muscles, and directed the patient's attention to her way of breathing, by posing questions about this specific experience. The patient shared her immediate experience. By giving a new meaning to the body, a contrast to the meaning of being detached from the body emerged. In study II, similar comments appeared. When the physiotherapist and Linda facilitated

movements of pelvis independently of lumbar back and chest, Linda claimed that she flexed her toes when she straightened her back. Agnes struggled to improve the balance in standing positions, and commented on her diaphragm, as well as her way of standing. In study III, case 2, the immediate meaning making comments appeared as a process. First, the patient commented that she did not notice her breathing, then dependant on the physiotherapist's touch of her breast cage, she noticed. Finally, on the basis of these experiences, she discovered the presence by herself, by expressing the words, 'what do I notice'. In the next moment she discovered the first vague experience of the breathing constrictions. Merleau-Ponty (2004) emphasised that, when the subject begins to reflect, the reflection is connected to an unreflective experience. Moreover, through reflection the subject discovers the presence to herself or himself and the possibility of an outside spectator.

During treatment, based on experiences within and outside the treatment context, the physiotherapist and the patient continually reflected on, and connected threads between, the different uses of the body (Paper I, II). The following example illustrates reflection on the experience of breathing restricted across contexts (Paper II). In the first and third video-recorded session, Mads and the physiotherapist reflected on restricted breathing. First, Mads linked the experience of time pressure at work to restricted breathing, an experience he overrode. Then, he connected restricted breathing to an escalating conflict at work. By now, he solved the problem differently, by sharing it with his sister.

Over time, the facilitation of the different types of dialogues in close connection to the facilitation of the variation of movement and breath seemed to influence the patients' processes of becoming more in touch with their bodies. This seemed to constitute a new basis for expressing and not withholding incarnated meanings. Reflecting retrospectively, all but one of the patients extended the frames of the definitions of their symptoms. This finding appeared as a surprise, in particular with regard to the patients of the limited change group, who mainly defined their symptoms within a biomechanical frame. In the introductory interview of study II,

Laura rejected any connection between family problems and the development of back pain. The rejection dissolved as she became more in touch with her body, and gave new meaning to the pain of her back muscles by defining them in an emotional context, ‘as if a chill goes down my spine’.

In short, the intertwined approach of movement, touch and reflection, appeared as a bodily meaning-making process. By naming their vague bodily experiences, the patients seemed to become more in touch with themselves, which included improved self-knowledge and a new basis for trying to act more variedly in the world. Merleau-Ponty (2004) emphasised that consciousness consists in rediscovering the actual presence to oneself. Additionally, the patients, by naming their bodily experiences, seemed to develop a language for use in discourses concerning the exploration of pain in different meaning contexts. The knowledge of being more present and being capable to reflect on their experiences may serve as a tool to cope with pain in more varied ways. In accordance to phenomenology the possible is based on the real (Merleau-Ponty, 2004). Merleau-Ponty (2004) stated that through reflection we become responsible for our history, and through decisions we stake our lives, and in both these cases action is needed. The patients in these studies extended their knowledge about themselves. How they apply and develop this knowledge in the future is an unexplored area.

7. Conclusions and Implications

In this thesis, NPMP long-term treatments for patients with chronic muscle pain located to back and/or neck have been studied in detail and from different angles. Triangulation of qualitative interviews, personal notes, and observations made it possible to highlight the patients' as well as the physiotherapists' perspectives, and the unfolding of the treatments themselves. Several different theoretical approaches were applied to analyse the data material. In Paper I, we were able to describe and analyse changing stories about the bodily experiences with the help of a narrative approach. In Paper II, we dwelled more on processes of change, in breath and movement and in patients' perceptions of and reflections about these. The basis for in-depth analysis of these phenomena was Merleau-Ponty's thinking about perception and the lived body as well as the theoretical perspective of the NPMP treatment. Finally in Paper III, we described and analysed communication between patients and therapists in the treatments, drawing on a systemic perspective of communication.

In the studies, the long-term NPMP treatments appeared as demanding processes for the patients and the physiotherapists. Both the therapeutic tasks as well as the therapeutic relationship – different but intertwined aspects of the processes – challenged the participants in a number of ways. Ongoing negotiations about joint contributions with regard to emerging bodily experiences, which for the patients appeared as more or less indeterminate, stood out as an essential part of the therapeutic relationships.

At the start of and through treatment, the patients' experiences of their body with regard to movements, breath and muscle tension varied between being detached from to becoming partly in touch with the body. Their presented burdened stories of growing up in painful relationships, bearing loss at earlier or present time, or struggling with ongoing strain and pain by withholding expressions of words and emotions, mainly appeared disconnected to their understanding of the origin of the symptoms. During treatment, change was facilitated on the basis of the specific

patient's experience of being wholly or partly detached from the body, as well as the therapist's observation of and the patient's experience of moving in unvaried ways. Change emerged as detailed step-by-step processes of differentiating movements in close connection to differentiating breath. Concomitantly, the patient was supposed to attend to and give meaning to bodily experiences by commenting what she/he perceived, as for instance, the experience of local muscle tension. The growing collaboration through the step-by-step process with regard to varying movements and meaning of bodily experiences and symptoms seemed to be the very (re)building of the experience of being bodily connected. The increasing experience of being more in touch with the body as well as the tentative reflections on how the patient bodily acted and reacted in different daily life contexts seemed to (re)create meaningfully connected and lived stories of psychological and physical pain. Also earlier incarnated painful experiences came to the foreground as emotional expressions and more or less vague memories. Facing these vague experiences of incarnated ways of acting seemed to open for exploration and variation, as for instance expressing one's feeling to others instead of biting teeth and jaw. In glimpses, most of the patients discovered how they contributed to the experience of being in touch with as well as being detached from the body, by for instance, overlooking and overriding experiences of pain. Then and there, the emergence of actions that create a distance to pain and strain may be understood as useful coping strategies. Over time, implicitly from the physiotherapists' perspective, unvaried sustained actions shut patients off from varied patterns of moving and acting.

In these studies, not all patients called their unvaried ways of moving into question. Implicitly, some laid emphasis on the removal of pain separated from the reflection on their ways of acting and coping in daily life. Based on their growing understanding of the treatment in the making, the NPMP approach seemed to emerge as too all-embracing, incompatible with their intentions at treatment start. Giving attention to the body as the incarnated subject of lived experiences and as a phenomenon of mechanical imbalance, may feel too unusual and even meaningless

for patients who may expect or at least hope for the physiotherapist to remove symptoms in more mechanical ways. Additionally, NPMP treatment may be experienced as too demanding, due to slow progress over time and a rather close collaboration.

These studies showed that facilitating change, the physiotherapists searched into the individual patient's own world of meaning connected to incarnated experiences. Adapting her/himself to the patient's level of moving and understanding appeared as a prerequisite for learning new ways of moving and acting. On the basis of the emphasis given to the patients' ability to transfer experiences from the treatment context to contexts outside treatment, the intention of the NPMP approach includes influencing the patients' capability to learn to apply new knowledge about themselves in different contexts. In order to sustain improvement over time and across contexts, learning about processes of change as well as learning how to maintain and apply this knowledge seems important. We can state that the patients in our studies told about transferring new consciousness about habitual bodily reactions and change from the treatment context to contexts of daily life. However, we cannot tell if and how these change processes came to work out in a longer run.

Hopefully, these findings can be useful in clinical contexts as basis for discussion among NPMP specialists as well as other physiotherapists who work with patients suffering from chronic muscle pain. Being aware of treatment constraints may help physiotherapists and patients to reflect on, accept and manage difficulties. At the start of and through the treatment, sharing ideas about suitable ways of collaborating with regard to balancing distance and closeness, as well as the aims of the treatment, may help patients to direct attention to and to gradual verbalise their own needs. Reflecting on the emergence of pre-reflected or vaguely experienced phenomena, as for example muscle tension, may help patients to understand these types of obstacles as common and to redefine them as recurrent events of possibilities for exploration. Based on different types of obstacles to change, introducing and discussing additional or alternative treatment approaches for shorter or longer periods may be useful.

Participating in group training, for instance, patients may have more time and space to explore and reflect on movements on their own.

In these studies the access to change, based on multiple approaches of movement, touch, and talk, included specific and detailed meaning-making processes of differentiation of movements and breath, based on body-to-body and/or face-to-face communication between the physiotherapist and the patient. These studies open space for new questions to be posed with regard to the long-term outcome for the individual patient. More knowledge about processes leading to experiences of being detached from the body is needed. Moreover, more knowledge is needed about the contribution of working on body awareness as well as connecting meaning to symptoms and bodily reactions in the treatment of patients with chronic muscle pain within and across treatment contexts. Within physiotherapy approaches for patients with chronic pain, more research is needed in order to increase knowledge about the details of essential elements of different processes of change.

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